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CONTENTS

Some Aspects of the Study of Nutrition in Southern California . . . . . ALLISON G. JAMES . . 7

Therapeutic Aids in the Treatment of Periodontoclasia . . . . . THOMAS B. HARTZELL 13

Report of Committee on Nomenclature 16

The Historical Background of Periodontology (Symposium continued): Observations Related to Periodontology . SAMUEL R. PARKS . . 18

Part Time Mouth Breathing and Periodontoclasia 24

Arvah St. Clair Hopkins 25

Editorials

Why the Decrease in Dental Students? 26

A Valuable Record 27

Abstracts and Extracts of Current Dental Literature for 1939 (cont'd)

(e) Symptomatology and Diagnosis 28

(f) Treatment 34

(h) Vincent's Infection 53

(i) Miscellaneous 55

The American Board of Periodontology, Inc. 57

Index of Abstracts 62

Index of Authors 63

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THE JOURNAL OF PERIODONTOLOGY is published to serve as the professional journal of periodontia; to keep dentists in touch with research being carried on in this field and related sciences; to stimulate greater interest in the supporting tissues of the teeth and their relation to oral and general health. The plan to continue the publication of abstracts indefinitely will make the Journal a fund of extensive information, readily available to students, teachers, researchers, and clinicians.

The Journal is the official organ of the American Academy of Periodontology and will contain, therefore, those papers of scientific and clinical interest which are presented at the annual meetings of that society. A part of the transactions of the 1940 annual meeting are in this issue. This number concludes the abstracts of important articles on periodontia that appeared during the year of 1939.

We are grateful to all who have made available the subject matter from which the abstracts and copies of abstracts have been made, including the authors of the original articles, owners of the journals mentioned in the text of the abstract section, and those who have aided in any way in compiling the material presented in this issue.

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"There is a certain fascination in observing the crescent stage of some object of use or beauty: that stage wherein the beginnings of things move on toward maturity, toward completeness, but as yet are at some distance from the goal. . . .

"We are living in serious, in startling times, serious and enthralling beyond anything we have ever known; in times of depressed standards in many interests, and stagnation where it had scarcely been observed till now. Yet now and again one takes notice of some interest, some movement, some calling which is crescent, which is developing, seemingly going counter to the general trend toward stagnation and decline, and becoming an important activity far beyond the promise of its beginning. Among these vital interests, these upward movements, there is scarcely to be found one more interesting then dentistry, one more steady in its upward course, holding more closely to a well ordered program, and especially more definite as to what its final goal must be. Dentistry is now in the middle of its upward journey; it is like the mounting flame in the middle of the brush heap, like the enchanting middle point in May between winter and summer."—*Extract* from "Advancing Standards" by Henry H. Piper. *Mass. D. Soc. Bul.*, 16(3):27-28. July, 1940.

THE JOURNAL OF PERIODONTOLOGY

JANUARY, NINETEEN HUNDRED FORTY-ONE

Some Aspects of the Study of Nutrition in Southern California, with Especial Reference to the Work of Francis M. Pottenger, Jr., M. D.*[1]

By ALLISON G. JAMES, D. D. S.
Los Angeles, California

THE DEPENDENCE of oral health upon systemic health and the importance of nutrition in health maintenance have been receiving progressively greater attention from the dental and medical professions. The relation of environment and nutrition to dental development is a comparatively new study. In Southern California Francis M. Pottenger, Jr., has been carrying on clinical and experimental studies which tend to confirm the findings of Weston A. Price.

As man has changed his habits, he has impressed upon his surroundings a degenerative state, which is evidenced in many ways.

In Southern California the soil is deficient due to a type of terrain which naturally has a high run-off from rains and it is further leached by irrigation and the use of oil sprays for pests. The same factors that are tearing down fertility in other parts of the country are at work here, namely, mechanization of farming, single cropping, and the shipping away of almost all produce from the soil on which it grows.[1, 2] Crops grown in these deficient soils are correspondingly deficient in quantity and quality. The loss of trace minerals such as boron and manganese results in poor and scanty growth; the loss of the more abundant minerals, particularly calcium and phosphorous, results in crops without the normal sustaining and tissue building factors. The truck and fruit crops affect humans directly. The fodder crops affect humans through poor meat and inferior dairy animals. So far as we know it is impossible to buy Prime grade beef in Southern California. The government grading is Prime, Choice, Good, Commercial and Utility. A wholesale meat dealer recently told us that he felt lucky when he could find five beef carcasses of Choice grade out of the 2000 carcasses regularly in stock in the plant of a major national packing company. Nearly all dairy cattle are given dry feed augmented and flavored with many types of industrial refuse such as orange pulp and beet pulp. Whenever there is a residue from some food processing, an attempt is made to convert it to feed for domestic animals. This feeding may produce large quantities of milk for a short time, but

* Staff of Pottenger Sanatorium and Clinic, Monrovia, California.
[1] Read before the American Academy of Periodontology, at Cleveland, Ohio, September 5, 1940.

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it is of poor quality. The average productive life of a cow in this district is only 2¼ years. This figure is from the county agricultural commissioner of Los Angeles County. Recent tests made on market samples of milk in the vicinity of Los Angeles show that many of them contain only 0.6 gram of total calcium ash per quart instead of the expected minimum of 0.9 to 1.0.*

The extensive processing of foods for human consumption has a twofold purpose, to assure cleanliness and to make them keep longer, thereby reducing the cost and hazards of marketing. The chief result is that food is devitalized. The heat labile factors, which are necessary for normal growth and maturation, are destroyed. A result of this increased use of packaged foods and inferior but "tenderized" meats is the wide use of concentrates, which attempts to supply the missing minerals and vitamins.

In 1912, in the United States the average annual meat consumption was 185.8 pounds per capita. In 1934, this had dropped to 132.6 pounds.[3, 3a] It is estimated that 160.6 pounds per annum, per capita, would be necessary to supply an adequate protein for optimum health. A corresponding rise in the proportion of carbohydrates used has supplied the necessary calories, but at the expense of tissue building food factors.

In human beings the effect of these degenerative processes is a decrease in reproductive efficiency. By reproductive efficiency we mean the ability to reproduce tissue as well as kind. The falling birth rate and high percentage of sterile marriages indicate failure in the latter.[4]

Under degenerative diseases we must consider the increase in deaths due to heart diseases and the lowering of the susceptible age. Statistics show an increase of over 85% in a 34-year period.[2] Of much more general incidence is allergy or sensitization. Approximately 30% of absences from the Los Angeles County Elementary Schools are attributed to the pulmonary form of allergy, notably asthma and allergic bronchitis.[1]

Abnormal physiologic development is increasingly evident in modern man and especially among children and young adults. As a result of endocrine disturbances caused by nutritional deficiencies, many of them prenatal, the following abnormalities are observed in a growing number of cases; failure of the testes to descend, failure to menstruate at even 16 and 17, obesity, lack of the glabellar eminence in males, and weight distribution giving the appearance of the opposite sex. In fact there is a marked diminution of sex characteristics with an approach toward sexual neutrality.[5]

There is an increasing need for special educational facilities for backward or retarded children, often in the best families. Courses in parent education strive to combat emotional and temperamental instability in children. We have yet to see a problem child that does not need orthodontia.

Another effect of these degenerative processes is seen in skeletal malformation. Deficient bone development is noticeable in the face and jaws. Failure of the middle third of the face to develop in the forward as well as lateral directions is frequently seen. This is sometimes obscured by soft tissue as many of the children showing this defect are fat in the face. Another type of malformation is the narrow pinched face with disproportionate length and flaring ears commonly thought of as the result of adenoids.

A trend toward greater height in the children of today and particularly those of Southern California has been misinterpreted. We assume that bigger children are better children. Clinical observations show a trend toward over-growth of the long bones at the expense of the body. The long bones of the extremities and ribs are usually small in diameter, while the bone age may be materially delayed. The bone shows a larger mesh trabeculation than is found in the accepted normal, a thinner cortex and general lack of density. We are not comparing these modern children with farm children of an earlier day. The normal accepted is not the ideal standard but that of the healthy child showing the best development under average conditions of modern life. This type of long bone growth, length at expense of diameter, is due to the failure of the epiphyseal juncture to close at the normal maturation time and/or to the continuation of the infantile growth rate past its normal limit.

*Pottenger Laboratory.

[1]Clifton, A. R., Superintendent of Los Angeles County Schools, stated to F. M. Pottenger, Jr., M. D.

Three results of this undue long bone growth occur.[6] First; there is an insufficient blood making organ due to the disproportionately small marrow. Second; the smaller trabeculated portion of the bone affords less potential storage for labile calcium. The density of the bones of children may be considered as an index of the amount of minerals available for physiologic processes. The minerals in the bones are relatively labile.[6,7] Third; the result of this type of growth is a skeleton mechanically unable to support heavy muscles Occasionally in spite of the low energy usually accompanying this type of development, a child will develop heavy, strong muscles. At about the age of puberty a case of Osgood-Schlatter's disease may result, a condition in which muscles developed in advance of the bones, through excessive leverage, cause an incomplete separation or starting of the epiphysis of the tibia, with separation of the tibial tubercle.[8] I have known of two cases of this recently in boys of about thirteen. One of the cases was bi-lateral. That boy is just beginning to get about after having both legs in casts for seven weeks. As further evidence of the etiology of this type of development, he is a hypo-thyroid and has hay fever.

The endocrine system is so complex, and our understanding of it is so meager that few positive assertions may be made safely. However, the development of the skeleton is accepted as being closely associated with the activity of the thyroid.[6] Also we know that disturbance of the thyroid gland may be produced by a nutritional deficiency, as in the "goitre belts." When continued deficiencies of nutrition are added to a disturbed glandular heredity, we find allergies, very slow dentition, and missing teeth, as well as inferior skeletal development.

Price and the anthropologists, Hooton[9] of Harvard and Dorsey,[10] have charted the path of degeneration in man. Experimentally, Pottenger has noted the same trend of degenerative changes in cats when on controlled diets. For eight years he has experimented with cats, starting with them because they were easily available, but also because they are carnivorous, and the human under natural conditions is carnivorous for the first nine months of life. As he is most interested in the young during the formative period, kittens, which are easily handled, are preferable to the adult rats usually used in nutritional studies. The cats also have a size which facilitates examination. With the exception of dental caries the lesions occurring in the cats are of similar character to those found in humans. This immunity to caries is probably due to the bactericidal quality of cat saliva, similar to that of dogs. Destruction of the periodontium and root resorption, however, are regularly found in deficient cats. The systemic and skeletal disturbances in the cats fed deficient diets, or with imposed or accidental glandular defects, are apparently the same as we see in children.

There are usually over 100 cats in the pens. They receive food which is believed to be the optimum diet for cats, at least it is sufficient to keep healthy cats in optimum health for years. It consists of meat, including glands and bones, dry feed raw milk, and liberal amounts of cod-liver oil. The sole difference in the feeding lies in giving either raw meat or cooked meat. It must be borne in mind that these cats have no opportunity to supplement their diet with any natural food such as a bird or a mouse.

The results of the destruction of heat labile factors in the diet of these cats may be summarized as follows:

1. Mother cats kept on cooked meat longer than two years usually die during delivery.
2. Cats fed cooked meat are usually smaller in build, but their leg bones, though smaller in diameter, are usually longer than those of cats fed raw meat. Also their fur is of poorer quality.
3. The muscle tone and visceral development of raw meat cats is greater than that of the cooked meat cats.
4. Poor dental development is one of the first defects noted in cats fed cooked meat. The deciduous teeth seem normal, but when the permanent teeth erupt, the incisors are usually irregular with two or three missing. Second and third generation cats on cooked meat show this more markedly.
5. The entire femurs of these cats have been analyzed for calcium and phosphorus. The kittens of both raw meat

and cooked meat mother cats show about the same amounts of calcium and phosphorus at birth, often within 2 or 3% of the femur of the mother. After the first two weeks there is a marked depletion, corresponding to the period of greatest growth. At the end of two months the raw meat kittens are gradually approaching normal, the cooked meat ones are still behind. The bones of second and third generation kittens given cooked food even after reaching adult life, show one-third to one-half as much calcium and phosphorus in their bones as corresponding litters fed raw meat. When the first, second, and third generations were kept on cooked meat, the third generation kittens were so poor that none lived past two months.

The experience has been that once a deficiency has been produced in kittens it cannot be reversed even by intense therapy. A well developed cat can be maintained on a deficient diet if thyroid and adrenal hormones are added, but these hormones plus a raw food diet will not bring a deficient kitten to a normal state. Also a mother cat on cooked meat for 12 to 18 months will not produce kittens approaching normal until she has been at least three years on raw food.[11]

The statement was just made that humans are carnivorous in infancy. In the light of that, the experiences of Stefansson, the Arctic explorer, are interesting. During expeditions he subsisted upon an exclusive meat diet for several years. Some of the meat was eaten raw, and fat and the viscera were included. Later he and a former associate subjected themselves to a controlled experiment at Bellevue Hospital in New York. For twelve months they lived on meat and water alone. They were allowed to select the meat and manner of cooking they desired. They excluded milk, butter, and eggs because many vegetarians illogically use them. The results of this experiment were even better than anticipated. Both men showed improvement in health and general well-being.[12]

In applying the data obtained experimentally, and from observations of anthropologists on the degenerative changes in man, Pottenger has worked out a program for rehabilitating allergic and underdeveloped individuals, particularly children. In treating these patients he uses diet, glandular therapy, and exercise, placing their importance in the order named.

DIET

In the diets an effort is made to furnish all the necessary factors without recourse to concentrates, and to use no foods in which the heat labile factors have been destroyed. Due to soil deficiencies it has been necessary to supply many of the minerals in special salt prescriptions. Large amounts of meat are used, particularly the glandular meats, liver, adrenals, sweetbreads or thymus, tripe, heart, kidney and brains. These supply large quantities of minerals and the known vitamins and some hormones. Twice a week one tablespoon of raw liver is given, usually as a cocktail. It is regular practice for those children under treatment who are near enough to eat supper one night a week at the sanatorium. Then they are each fed a raw adrenal in a cocktail. The young children like raw meat, especially raw ground beef.

The only cereals used are the whole grains, seed grain in fact. Raw milk is used, from cows actually on green pasture when available, and unpasteurized butter from the same source. Due to the inadequacy of pasturage in Southern California milk of this type is very scarce. Twice a day a green salad of raw leafy vegetables is given. Included in these are bean sprouts, an excellent source of vitamins B, C, and E. Most children after some months on this type of diet prefer it to any other. Sugar and white flour are forbidden. A whole orange is given rather than orange juice. Only eggs suitable for hatching purposes are used.

As an aid to digestion and assimilation a tablespoon of raw gelatin is given with each meal. In the Pottenger Sanatorium among the bed-fast tubercular patients the incidence of appendicitis necessitated two to three appendectomies a year. Since giving a tablespoon of raw gelatin routinely with special diet, only two appendectomies have been necessary in seven years.

THERAPY

For glandular therapy the main reliance is upon extracts of the adrenal cortex which Pottenger makes in his own laboratory from beef adrenals. Also thyroid and pituitary extracts are used as indicated.

The adrenal cortex has been of exceptional value in treating childhood asthma. A summary of 50 cases of refractory asthma treated with adrenal cortex for one year or more showed improvement in their allergic symptoms in 84%. 90% of the same group showed physical improvement. Six of the thirty-five boys in this group presented nondescent of one or both testes. All six showed descent under treatment. 74% of the mothers of these patients had histories of thyroid or genital disturbance. Forty of these patients were taller than normal standards.[5]

EXERCISE

Systematic calisthenics to bring into use the greatest number of muscles are prescribed for night and morning. The aim of course is improved muscle and tissue tone, and also better coördination. The more deficient children show an alarming lack of muscular coördination. Care is taken to keep the child just short of the fatigue point. One of the most interesting things is the surprising determination some of these deficient children show in accomplishing improvement, and in these cases the improvement is spectacular. Persistence and regularity are necessary, and absolute coöperation on the part of the parents. Unfortunately in many instances the parents of the children most needing supervision are deficient and relatively unstable themselves. A pulse chart is used for determination of metabolic activity and this must be consistently kept to give a true picture.

In presenting the following case histories I wish to make it clear that these are cases with which I was professionally acquainted prior to the institution of treatment, and which I have followed throughout the course of treatment.

CASE 1:

Boy, at the age of five years had never spoken an intelligible word. He was pronounced 70% to stone deaf by an ear specialist. Two psychiatrists diagnosed him as a moron who should be institutionalized. An endocrinologist determined that the boy was a hypo-thyroid, but there was little response to conventional treatment. A well known metabolic research foundation made complete examinations and recommended very large doses of thyroid extract. These brought about a marked improvement but necessitated the administration of barbiturates to offset their exciting effect. Treatment with Pottenger has consisted of routine dietary and exercise regimen; daily doses of one to two grains of thyroid extract and adrenal cortex of the amount equivalent to ten to thirty grams of whole gland. These were varied as conditions indicated. At home the boy has had a competent graduate nurse in full time attendance.

Results: At the age of seven the boy was rated two years beyond his age in all except social adjustment, and my own observation of that would place him not far from normal. An example of his hearing is his ability, now, to distinguish between the tones of black and white keys on the piano. Now at eight years and five months he is able to attend regular school. His dental arch is constricted, and the eruption of the second teeth very slow and irregular. The long bones of his extremities are small in diameter, and yet he is too tall for his age. He has excessive soft edematous tissue and subluxation of the joints. This child will perhaps never be normal in the true sense, but from a complete liability he is being changed into a useful member of society.

CASE 2: .

Another case of hypothyroidism, but a slightly different type, is a girl, who at the age of eight was unable to talk at all intelligibly. She walked in the tottering and uncertain manner of a baby just learning. She showed the same reaction to strangers and other children that many of this type do, clawing and hitting although paradoxically they love people and crave society. This was the fourth child in a family, the oldest being sixteen years older. The mother's age at birth of this child was about thirty-seven.

After three months on routine dietary regimen, and thyroid and adrenal cortex extracts in moderate amounts, she was using words instead of gibberish. In six months she was using words in phrases, and walking as a normal child of three does. She now plays well with other children. This child presents a more difficult problem than the preceding case, and since treatment was started later, will possibly never attain as great a degree of improvement. This child also has constricted dental arches, and small diameter long bones, but has little excess

tissue, and uses quick darting movements. Her comprehension of directions and even of the moods of others is almost instantaneous.

CASE 3:

A girl at the age of three developed asthmatic bronchitis. It became so severe and persistent that it was necessary to keep a tent permanently over her bed for frequent use of an inhalator. Two or more attacks monthly were usual. Tonsils were removed at four with no improvement. She received cod-liver oil and malt extract daily throughout the year. At the age of nine a change in diet was made to this extent and this only: one raw fertile egg and one quart of raw green pasture Guernsey milk were taken daily. Before this she had had one or two sterile eggs each week and pasteurized milk of which she drank not more than a pint a day.

Result: marked diminution of attacks within three months, complete cessation at six months, and no recurrence regardless of colds or fatigue in four years. At the age of twelve, six months preceding puberty, she became extremely nervous and presented serious disciplinary problems in school. Adrenal cortex extract, the equivalent of ten grams of the whole gland, was given daily. This brought about a calm and controlled demeanor within two weeks and increased mental acumen. This extract was used for one year regularly, and is now required only occasionally.

CASE 4:

This case presents a young woman at the age of twenty-one, with fairly well formed dental arches, excellent presence, slightly taller than our California normal. She is five feet ten and one half inches. To a casual observer she gave an appearance of abundant health. Yet she was pronounced an incurable sufferer from spastic colitis, who must spend 90% of her life in bed, and since the age of fifteen that has been her experience. In November of 1939 she was placed under Pottenger's care. For five months she remained at the sanatorium under his supervision receiving the same dietary regimen as other deficiency patients. (These cases were not treated, in the part of the sanatorium devoted to tubercular patients.) This diet included many foods to which she was known to be allergic, and in the beginning they caused the expected reactions. Soon she was eating them with no ill effects. The therapy consisted in administering small amounts of pituitrin, adrenal cortex extract, and thyroid extract. This latter was given because of her prematurely greying hair. Moderate exercise gradually increasing in amount has also been part of the treatment. Today it is apparent that with strict adherence to her present regimen she may live a normally active life, and should improve indefinitely.

SUMMARY

These observations have been presented in the belief that they seem to shed some light on the factors which affect human beings from generation to generation, and are apparently not the commonly accepted vitamin deficiencies. It is hoped that they may lead to the recognition of the true causes of our greatest problems, dental caries and paradentosis. There is suggestive evidence that these are deficiency diseases. It is significant that none of Pottenger's patients who have been under treatment for any length of time show active dental caries, or alveolar destruction, or gingivitis. Many of them show arrested dental caries, and arrested results of previous degeneration of the alveolus. None of them have good dental arches. In a good organism we find good dental development; in a deficient organism it is possible through a regenerating program to prevent or to arrest dental caries and periodontosis, and, if taken early enough, to improve jaw development.

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704 Pacific Mutual Bldg.

* * *

Therapeutic Aids in the Treatment of Periodontoclasia*

By THOMAS B. HARTZELL, M. D., D. M. D.
Minneapolis, Minnesota

MY DEAR fellow members: Permit me to thank you for the honor of serving as your presiding officer at this Twenty-seventh Annual Meeting of the American Academy of Periodontology.

This is a time of joy and sorrow. Gladness, that we live in a country in which we have the inherent right to life, liberty, and the pursuit of happiness while other great nations of the world are torn by war and suffering. On the other hand we have sorrow that touches us more closely, caused by the loss of our talented and beloved president, Dr. Kronfeld.

Many of you are probably unaware that Ohio is my home State. My family came to Ohio to live in 1807, 133 years ago, and located fifty miles south of Cleveland. On a grassy hillside, overlooking the Mahoning River, peacefully sleep many more Hartzells than are now alive. Consequently, this meeting in Cleveland has a duel significance for me, a kind of homecoming, and a reunion of old friends.

As a teacher in the Dental College of the University of Minnesota, my work was made easier because I had had the advantage of previous teaching experience and a medical degree, and had done many post-mortems under the keen eye of my chief, Dr. J. Clark Stewart, professor of Histology and Pathology, in the Medical College of the same University. This work brought me face to face with the fact that some of the things we were doing in the teaching of dentistry were almost criminally wrong. For example, we were teaching students to keep sick teeth in use as long as they were comfortable, in spite of the fact that we were dealing with a germ disease; not dietetic or mechanical faults but germs were responsible for it.

Comparatively little was then known regarding bacteria. We did know that they were capable of breaking down living tissue and at the same time poisoning the body. We knew also that consumption, as tuberculosis was then called, was responsible for destruction of lung tissue and that the germs could be demonstrated in tuberculous pus by differential stains, carbol fuchsin and methylene blue, boiling in carbol fuchsin, and decolorizing in mild acid. Then the blue counter stains were used for the other bacteria. (This work was part of my job.)

We knew that boils and carbuncles were caused by round bacteria of two types, those that grow in bunches called staphylococci, and those that grow in chains called streptococci. It was also part of my work to demonstrate gonococci when the material could be obtained. The number of pus forming staphylococci that we recognized at that time were three, named by their color, staphylococcus aureus, albus, and citreous. Of course now there are other recognized

*Presidential Address read before the American Academy of Periodontology at Cleveland, Ohio, September 5, 1941.

varieties of staphylococci, but these are the ones that I could and did demonstrate, microscopically, to students of medicine and dentistry.

Louis Pasteur proved to the scientific world that there is a specific bacterium for every disease. Dr. Joseph Lister immediately applied Pasteur's idea in his surgical work and at once reduced the death rate in his surgical practice. He conceived his problem to be preventing the ingress of bacteria to surgical wounds; to that end he operated under a cloud of diluted carbolic acid spray. His marvelous results laid the foundation for present day surgery. He dipped his instruments in carbolic solution before use and his wounds were covered with carbolized gauze. Had he known more about Pasteur's teaching it would have helped him still more for Pasteur compelled surgeons of the Academy to carry antiseptic requirements still further. In 1878, he plainly told the Academy of Medicine in Paris, that

> If I had the honor to be a surgeon, impressed as I am with the dangers to which the patient is exposed by the germs or microbes scattered over the surface of all objects, particularly in hospitals, not only would I use none but perfectly clean instruments, but after having cleansed my hands with the greatest care and subjected them to a rapid flaming, which would expose them to no more inconvenience than that felt by a smoker who passes a glowing coal from one hand to the other; I would use only lint, bandages and sponges previously exposed to air of a temperature of 130 to 150 degrees centigrade; I would never use any water which had not been subjected to a temperature of 110 to 120 degrees centigrade.

He told them they were responsible for the accidents, (meaning deaths) by purulent infection in their service, even operative fever, he said was due to their lack of what we now call, surgical cleanliness.[1]

The dearest wish of my life would be gratified if I could convince the members of this Academy that the use of the principles laid down by Pasteur, would tremendously enhance the success of the conscientious periodontist; because it would be as impossible for pyorrhea to exist in the tissues around human teeth were it not for the invasion of pus germs growing on the sides of teeth, as it would be to harvest wheat if we did not first plant wheat. It was proven by Madame Blavatsky that babes are born with sterile mouths but as soon as the child's mouth goes to the mother's breast bacteria can be found in it, and when teeth erupt they are constantly covered by germs.

Believing as I do that pyorrhea is a germ disease, my problem has been *how to fight* them. I have had tooth brushes made to fit all tooth surfaces, both inside and outside and proximate interdental surfaces and have taught patients how to use them, to rid the teeth of many germs particularly at night when conditions for their growth are best, because they never die or grow old! Because every thirty-five minutes they double their numbers, at least forty-one times in twenty-four hours. One's effort then should be to check bacterial growth on the teeth and also on the tongue, for these germs grow on and between the papillae of the tongue enabling putrefaction and causing the offensive odors we, as dentists, are compelled to endure. I have found nothing so effective as the two per cent sodium ricinoleate solution called Detoxol or the tooth paste of the same name. The mechanical removal is accomplished with three quarter inch, No. 4 cotton rolls, held in an artery forcep, rubbing both teeth and gums heavily and by using the tooth brush. The bristles should be thrust in between the teeth to remove the interdental germs with a short strong movement, then withdraw the bristles and take the next tooth or group of teeth.

From the standpoint of its historical value I would like to record the fact that I initiated in the College of Dentistry in the University of Minnesota, a course for the teaching of the treatment of pyorrhea to our students in 1896-1897. Each student was required to treat four cases and received a mark on his work which contributed to his credit for graduation. At first this treatment was limited to the removal of calculus only. So far as I know this is the first course in any Dental College in the United States teaching the treatment of pyorrhea alveolaris now called periodontoclasia. I therefore can claim to be one of the pioneers in this field.

To Dr. John M. Riggs must go the credit for originating a treatment for this disease for he commenced to struggle with it

[1]Duclaux: *Pasteur, The History of a Mind*. Translated by Smith C. Hedges, p. 267. Dept. Agriculture, Washington, D. C.

in 1825 and his initiative was recognized by the Connecticut Valley Dental Association and they gave the name of Rigg's disease to the condition.[1] Many other men, since that time, have worked in this field but so far as I know, no attention was given to it in dental schools except in departments of operative dentistry and no college course taught, until the one before mentioned, in the University of Minnesota.

In the treatment of periodontoclasia many remedies have been suggested and used. I have personally used very few remedies and I think it may be of service to some of you if I call your attention to them. Dr. Harris of Georgia, many years ago, used the following which he compounded himself; crystals of iodine dissolved in Merck's beechwood creosote. This was prepared in the following manner; a bottle was half filled with crystals of iodine, the beechwood creosote was then poured in until the bottle was two-thirds full. This was then allowed to stand for several weeks and was vigorously shaken many times until a very thick, heavy, black solution was obtained. The second bottle was filled two-thirds full with tannic acid flakes, this was covered with glycerine and shaken in the same manner; the resultant solution was thick and heavy. These solutions were used in treatment in the following manner: teeth were protected from the saliva with gauze and a very slender pointed instrument was dipped in the black solution and the point of the instrument carried under the gum margins, all the while protecting them from moisture. A second thin instrument was then dipped in the solution of tannic acid and glycerine, which was deposited upon the first, still carefully protecting the medicines from saliva, after which a stream of warm water was thrown upon the medicated gum edges. This caused the two solutions to combine making a waterproof coat which would cling to the gum edges twenty-four to thirty-six hours. This preparation I have found exceedingly useful for many years as a medication in the treatment of periodontoclasia after scaling has been done.

A second solution which I have found of use in certain types of inflammation of gum edges is composed of zinc sulpho-carbolate dissolved in cinnamon water. The proportions are zinc sulpho-carbolate—1 ounce, with sufficient cinnamon water to make eight ounces. In soft, tender, bleeding gums, this would be applied as follows; grasp a No. 4 cotton roll, cut in pieces three quarters of an inch long, this to be dipped in the solution and firmly, under a pressure of three or four pounds, squeezed into the gum edges, with the cut end of the roll. The patient is taught to do this himself morning and evening, and gums that are bleeding and swollen rapidly become firm and hard.

A third solution which I have found very useful, was given me by Dr. Frank Lawrence, Ottumwa, Kansas. He told me that the solution was obtained by digesting oak wood in sulphuric acid and aging it under vibration for months. His method of aging it amused me greatly. He placed the container with ingredients in his automobile and let it ride around with him, for about three months. Thus treated the solution became thick and viscous. This solution must be carefully applied with a pointed instrument to the pockets and gum edges. It both destroys bacteria and shrinks the tissues. If repeatedly applied the tissue becomes white and sloughs off. It must be handled with great care because a single drop of it on a linen napkin oxidizes the fabric completely and in a few minutes you have a black hole in the cloth.

710 Physicians & Surgeons Bldg.

[1] *Transactions of the Connecticut Valley Dental Association*, Pub. 1869.

Twenty-Eighth Annual Meeting

AMERICAN ACADEMY OF PERIODONTOLOGY

HOUSTON, TEXAS, OCTOBER 23-24-25, 1941

Report of the Committee on Nomenclature*
American Academy of Periodontology

The last extensive report from a Committee on Nomenclature to this Academy was presented at the 1937 Annual Meeting. At that time, the Committee on Nomenclature, Dr. Arthur H. Merritt, Chairman, reported an exhaustive study of the problems of nomenclature related to the science of periodontology.** The Academy accepted the 1937 report but no steps were taken to put into effect the recommendations of that report. The Academy and its members continue to employ, and possibly to be annoyed by, a mixture of terms, some of which are vague and not in keeping with the scientific progress made in the other phases of periodontology. The use of certain terms has prevented a more widespread diffusion of knowledge than might have been the case with a nomenclature of more specific clarity and unity of thought and expression. An exchange of ideas and thoughts is possible only if the conversants employ a language of marked specificity. The newer knowledge in the field of periodontology calls for a language of more accurate definition than is now used in some circles. With these thoughts in mind, your Committee on Nomenclature respectfully submits the following report.

Terms relating to the teeth and dentistry are rooted from both the Latin and the Greek languages. The Latin word *dens* and the Greek *odous* serve as the keystones of dental nomenclature. To these roots may be added such prefixes and suffixes as are necessary to formulate words of accurate definition. It would appear reasonably logical that, if dental nomenclature is to be in keeping with the high classical and scientific esteem to which dentistry aspires, it should be based on pure classical origins rather than made up of a collection of hybrid terms.

The science of periodontology concerns itself basically with the so-called supporting or investing structures of the teeth. Two prefixes are in use to designate collectively these tissues: "peri" and "para," both of Greek origin. The prefix "peri" has enjoyed a longer use in this country than the prefix "para." "Peri" was the only prefix used in this country in the early phases of the history of periodontology. The terms "periodontology," "periodontia," and "periodontist" were originally formulated with no thought of etymological controversy. As a matter of fact, "peri" was used rather exclusively in this country until approximately a decade ago when important contributions to dental literature began to appear from workers in Germany and Austria, some of whom we are now privileged to have as residents in this country. These workers quite naturally subscribe to the nomenclature of the Federation Dentaire Internationale. While generally accepted by European workers, the nomenclature of the Federation Dentaire Internationale has not been widely accepted in this country. Your Committee proposes to discuss some of the reasons for what may be called the American opposition to this nomenclature.

The prefix "peri" is used in anatomy and in medicine generally to designate tissues which surround, encase or ensheathe: "pericardium," "periosteum."

The prefix "para" has a much wider use. In anatomy, it is used to designate structures which lie nearby or beside: "parathyroid," "parapineal." It is also used to connote embryological relationship: "parovarium," "paroöphoron." In chemistry, it is used to indicate closely related compounds: "formaldehyde," "paraformaldehyde." It is apparent that "para" is a prefix of multiple inferences and is, therefore, not as accurately descriptive as the prefix of more limited connotation, "peri."

If dental nomenclature is to be pure rather than hybrid in its etymology, the Latin root *dens* should not be used with either of the Greek prefixes "peri" or "para." Rather should the Greek root "odont" (from *odous*) be employed.

*Read and adopted at the Annual Meeting, Cleveland, Ohio, September 5, 1940.

**J. Periodont. 8(2):88-95. July, 1937.

A number of suffixes may be utilized in the construction of terms related to periodontal anatomy and pathology.

The Greek *klastos* (broken) is the etymological source of the derivatives "clasia" and "clastic." These suffixes are logically used to indicate non-specifically and collectively all the destructive processes, from whatever cause and of whatever nature, of the part to the name of which they are attached. Such terms naturally do not indicate the etiology or the nature of the destructive processes. Descriptive adjectives must be added or other more specific terms used for accurate definition. The all-inclusive, non-specific terms "periodontoclasia" and "periodontoclastic," while of limited usefulness, nevertheless serve importantly in periodontal nomenclature.

The suffix "itis"—of Greek origin—is defined as a suffix indicating inflammation of the part to the name of which it is attached. Its use is so well established as to obviate discussion. The inflammatory diseases of the periodontium are, therefore, properly designated "periodontitis." This term may be modified by such adjectives as may be necessary to accurately describe the prevailing disease: "acute," "chronic," "purulent," "non-purulent," "ulcerative," "hypertrophic," et cetera.

The suffix "osis" is a termination of rather wide and multiple inferences. It is used to indicate diseases or morbid processes in a broad general sense. It is also used to indicate non-morbid processes. If a limitation on its inferences is to be placed, it may be pointed out that it is used to denote *degenerative* rather than *inflammatory* disease. For example, nephrosis is defined as any disease of the kidney, particularly those diseases degenerative in character; an inflammatory disease of the kidney is designated nephritis. The use of the suffix "osis" in periodontal nomenclature may, therefore, be construed as broad, vague and non-specific. It cannot be said to indicate accurately any one specific morbid condition, but rather to connote collectively all the periodontal diseases. It may, therefore, be properly used as a synonym for the suffix "clasia."

Based upon the foregoing discussion, your Committee offers the following recommendations:

1. That, in order to have a nomenclature of pure classic origin, only Greek roots and derivatives be used in formulating periodontal terms.

2. That "odont" (from the Greek *odous*) be used as the basic root of periodontal nomenclature.

3. That the prefix "peri" be used to denote the supporting tissues and structures of the teeth, the term periodontium to be defined to include the periodontal membrane, the alveolar bone and the gingiva.

4. That the prefix "para" be used only when it is intended to indicate something specifically beside or nearby, and not surrounding the tooth. The so-called parietal abscess may properly be designated parodontal abscess if the lesion involves structures only on the side of or near the tooth but not involving the entire circumference of the tooth.

5. That all the diseases of the periodontium be collectively and non-specifically designated "periodontoclasia" or "periodontosis."

6. That the inflammatory diseases of the periodontium be designated "periodontitis."

7. That the terms "periodontology," "periodontia" and "periodontist" be continued in usage as now generally accepted in this country.

Your Committee concurs in the recommendation of the 1931 Committee on Nomenclature that the term "gingival crevice" be discarded in favor of the term "gingival sulcus." The reasons for this recommendation are obvious and are fully discussed in the 1931 report.

Your Committee is of the opinion that the Academy, during its twenty-seven years of vigorous and constructive activity, has made inestimable contributions to dentistry in general and, more importantly, has also been largely responsible for stimulating and guiding the notable progress in the science of periodontology in this country and throughout the world as well. By virtue of the position which the Academy now holds, it has not only the privilege but also the responsibility of further promoting its influence. Your Committee, therefore, feels that the Academy should establish an *official* nomenclature for use in its transactions. To this end, your Committee recommends:

1. That the system of nomenclature outlined in this report be adopted as the official nomenclature of the Academy.

2. That essayists appearing on Academy programs be requested to employ the proposed official nomenclature.
3. That papers to be published in the Journal of Periodontology be editorially revised accordingly.
4. That copies of this report be sent to the Committees on Nomenclature of the American Dental Association and the Canadian Dental Association, to the Secretary of the Federation Dentaire Internationale, to the Executive Secretary of the National Conference on Nomenclature of Diseases, to the Secretary of the National Association of Dental Examiners and to all the members of the American Association of Dental Editors.

Respectfully submitted,

JOHN OPPIE McCALL,
JAMES E. AIGUIER,
HARRY LYONS, *Chairman*

* * *

[A SYMPOSIUM]

The Historical Background of Periodontology*

(CONTINUED)

OBSERVATIONS RELATED TO PERIODONTOLOGY RECORDED PREVIOUS TO THE EIGHTEENTH CENTURY

By SAMUEL R. PARKS, D. D. S., *Dallas, Texas*

IN ORDER to pursue the study of history intelligently and with advantage, it is frequently essential to throw the search lights of investigation back to periods and beginnings which are shrouded by the mysterious and fabulous traditions of the mythological ages. It has always been desirable, in fact, essential, in the study of history, to have a broad view of antecedents in order to fully realize and understand that which was, and to comprehend the trend of thought and action which resulted in events and developments that brought about that which now is. The growth, evolution, and achievement of nations have been on a parallel with that of science and art. None have been of sudden creation, but each has been the result of slow accretion.

The history of dentistry in the initial evolutionary stage must be traced to that of medicine and surgery. It seems like a paradox, and yet it is undoubtedly true, that the beneficent profession of the healing art had its origin in sacrificial offerings of animals to honor the Deity, and in their uses as human food. These, to some extent, taught a certain class of men anatomy and physiology of the lower animals at least. Man has indulged in private and public combats ever since the days of Cain and Abel, resulting in injuries and wounds of the human body. It is fair to suppose these developed something of the knowledge of human anatomy and physiology. The ancient Egyptians undoubtedly gained greatly in knowledge of the structure of the human body and its physiological functions as a result of their espousal of the doctrine of soul migration, which led them to greater care in the preservation of the human body after death and thereby developed the embalmer's art. With the unfolding of this knowledge it would not seem unreasonable to assume that a conception of causes of disease was developed. Treatment would be a natural sequence.

The *Papyrus* of Ebers, which, it is claimed dates back to 3700 B. C., makes mention of diseases of the teeth and gums. Dentists are familiar with this early dental record.

*Read in part before the American Academy of Periodontology, October 20, 1938, St. Louis, Missouri.

Hippocrates was very probably the first person to compound a dentifrice. His formula:

> Take the head of a hare, and three mice, two of these having the entrails removed; incinerate them and reduce them to ashes; then mix with equal weight of powdered marble.

Not so bad a formula when stated another way, i.e., use a combination of ashes and powdered marble as a dentifrice.

At the beginning of the First Century, Cornelius Celsus, who was called the "Latin Hippocrates," flourished in Rome. He recommended and practiced the scarifying of the gums. This is the first authentic record of an attempt to treat diseased gums that I have been able to find. Celsus was adverse to tooth extraction, as were many of the practitioners in this period. Marcellus and Galen held this view also. Celsus employed gold wire for ligating loose teeth. He also prescribed dentifrices and lotions for the purpose of fastening loosened teeth by astringent constriction of the gums.

Galen was the first man to recommend grinding for the adjusting of occlusal trauma. His approach was crude but he attained the desired end. When a tooth is loosened and projects beyond the level of the others, he recommended filing down the projecting parts, the tooth being held between the fingers, so as to prevent it being further loosened. As soon as the operation caused pain it was suspended and anodynes were administered. After a lapse of a few days the operation was repeated. Galen used ashes as a dentifrice. He recommended the use of ginger for fetid breath. His formulae for dentifrices were written in verse, as were most of the formulae in this period. One of Galen's claims for the virtues of one of his powder formulae sounds as if it were written by a well trained and experienced tooth paste advertising writer of 1940. It reads thus:

> It is an excellent powder; very fine; it has the property of whitening teeth, causing the disappearance of swelling of the gums, and of removing that which adheres to them so completely that no cases of tartar can be seen, even when the gums are exposed by laughter.

Remember the year—131 A. D. Note the four qualities—fine powder, whitens, reduces swelling, and cleanses.

Dentistry along with other professions suffered during the Middle Ages. It had its awakening during the Crusades. As early as 1308 the barbers of London were incorporated into one guild with the surgeons, and the English name of barber-surgeon for several hundred years embraced the practitioners of all special branches of surgery. The title of "Doctor" was invented in the twelfth century at the first establishment of the universities, and indicated a learned man in any science. William Gordenia was the first person upon whom the title Doctor of Medicine was bestowed. He received it from the college at Asti, in Italy, in 1329; whether from a study course or honorary has not been ascertained.

Greater attention to the study of the diseases of teeth developed. The art of printing being now available in the dissemination of knowledge, resulted in the first published works devoted to the structure of the teeth and their diseases. Among these was one published at Lyons, in 1581, by Urbain Hemard, surgeon of the Cardinal D'Armagnac. He evidences a study of comparative anatomy and sound physiological observation in the statement that man must of necessity have combined all the kinds of teeth which distinguish other animals, since he is to feed on all kinds of foods on which the other animals severally subsist.

Notwithstanding the fact that many distinguished specialists in surgery made their mark at this period—Berrenger, at Padua, in the surgical treatment of the head; Ingrassia, at Palermo, in surgery of tumors; Mariano, at Naples, in lithotomy, and Ambroise Paré, in the treatment of gunshot wounds, which had now become a new condition in civilization's progress—and many of the old methods of treatment gave way to new ways, surgery as a whole was not looked upon as a very exalted calling.

The minor operations everywhere in Europe were relegated to the care of barbers. Dental surgery being embraced under this head, there were no dentists then as specialists, except in so far as the barber cared for or removed teeth.

The Paris surgeons for redress against the degraded condition of their profession appealed to the Faculty of Medicine, toward the end of the Fifteenth Century, which

resulted in permission to enjoy certain distinctions over the barbers upon paying an annual tribute to the Faculty of Medicine amounting to sixteen sous. In 1505, the barbers and physicians of Paris entered into a compact by which, for certain considerations, the barbers were admitted as members of the medical faculty, and their title changed to "Tonsores Chirurgici," instead of "Barbi-Tonsores." The surgeons galled under this domineering of the physicians for ten years. Then they appealed to the University of Paris, and secured authority to form a college of their own, with the power of creating Masters-, Bachelors-, Licentiates-, and Doctors of Surgery. In spite of constant trouble with the physicians, the surgeons enjoyed their independence. In 1596, they promulgated a rule against the barbers, compelling them to call a surgeon in all cases of importance and to circumscribe the field of their operations to the trivial cases. Under this rule the barbers probably continued to be dentists.

During the Seventeenth Century there occurred all over Europe an awakening in the direction of scientific investigation and experimentation. The mysticism and empiricism of the ages gone before were being questioned, and propositions or discoveries in the realms of the experimental sciences were measured and proved before they were accepted. This led to the organization of academies of sciences in nearly all the countries of Europe for the purpose of bringing into closer relation the discoverers, explorers and investigators of the time. Much new thought and original research very soon compelled men to confine themselves to smaller areas of special work, and the beginning of what may be called the renaissance of the Egyptian ways—a division of labors and specialists in all professions—may thus be placed at about 1660.

Dentistry, as the result of this specializing in research, began to attract the attention of some medical men, and while the title "Surgeon Dentist" was first given to several men in France, notably Gillies, in 1622, it was not fully established until many years later. B. Martin, author of a work on the teeth in France, (1670) was called an apothecary, presumably in contempt, by Fauchard.

In Germany, what may be called dentistry was not unknown in the Sixteenth Century. Peter Jordan published *A treatise upon all kinds of infirmities and diseases of the teeth* in 1532. This is taken largely from the books of Galen, Mesue, Celsus and Pliny, "with brief and useful *instructions*, how to preserve them in good health and to extract the bad ones and their roots, *easily, safely* and *without pain*."

In the preface to this work the publisher remarks:

The Lord Almighty, who is cognizant of everything from its very beginning, in his inexpressible wisdom, ordained, not vainly, that the teeth of brutes, as well as of mankind, should be the first preparers of food so that nature might be assisted in preserving the race . . . But the teeth are not only preparers of food, but are also given to mankind for speech and for ornament, particularly the front ones, which receive and echo the impulse of the tongue in sweet sound, or, as Pliny has it, *creates order* and *sweet civility*.

This little book contains thirteen chapters; it is full of quaint remedies and perpetuation of the empiricism of the ages that preceded it. It concludes with the moralizing observation that "when adversity or ill luck attend, a haughty spirit, magnificence, and pride disappear."

Later, in 1559, a book, *Zeen Artznei* (tooth doctoring), was also published in Germany, but the author's name is not given. It is in its matter so much like the one published by Peter Jordan, in 1532, that it may have been a second edition of this. It contains many curious observations.

Among them are several prescriptions for pastes and washes. Here we find the first record of instructions to the patient about mouth care—as follows:

He must each morning, as soon as he rises, take a coarse piece of linen and rub his teeth inside and outside and cleanse them by a rubbing once or twice. Such rubbing strengthens the teeth and the gums and prevents decay. After this he should take salt and rub the teeth; this will secure them to be white, fresh, firm and healthy. Or he may take salt and honey mixed, burn it to a powder, and with this powder rub the teeth; or he may take myrrh and alum, powder it and rub the teeth together; or he may take burnt alum, dissolved in vinegar, and wash the mouth with it. He may also take myrrh boiled in wine as a mouth-wash, which strengthens the teeth, prevents the gums from receding, the forming of bad odors and putrefaction.

Finally he says:

Always after eating wash the mouth with wine or beer that there may be washed off everything that

might adhere to the teeth, which may make them decay or create bad odors.

This brings us to Ambroise Paré, Father of Modern Surgery. He began his career as an apprentice to a barber-surgeon. His great skill and ability while still a young man caused the commander of the French forces in the Piedmont campaign of 1537 to take an interest in him, which resulted in his appointment as master barber surgeon. This service gave him opportunities to introduce experiments and reforms in the practice.

Upon his return to Paris he was ridiculed, vilified, and maligned, but having the support of the men in power on his side he paid little heed. He insisted that every surgeon should be educated in anatomy by dissections and that all should have a systematic medical training, and he instituted schools for their instruction. His dental observations were: The adherence of the teeth to the jaw is caused by a ligament which goes from the root of the tooth to the jaw. That teeth continued to grow during the lifetime of the individual and they assisted in distinguishing taste. (Galen, too, believed this fallacy.) In Chapter II, Book IV, of his works, Paré speaks of the anatomy and physiology of the teeth and gums. Paré's most notable periodontal observation was: Teeth grow throughout the whole lifetime, and that the wearing away consequent on reciprocal friction and mastication is compensated in this way.

His treatment for toothache deserves brief mention, as follows:

"1. Regulate fittingly the mode of living.

2. Evacuate or dissipate the morbid humors; this may be effected by various means, namely, by purgatives, by bleeding, by gingival scarification, by the application of leeches on the site of the pain, by cupping on the back of the neck or the shoulders.

3. Applying in each single case the medicaments best adapted for calming the pain."

Paré says that a file may be used to plane down a tooth that stands out above the level of the others.

In one chapter, Paré covers mouth care as follows:

After meals the mouth must be rinsed with water and wine, or with water with a little vinegar added to it, and the teeth cleaned from all residues of food, so that putrefying may not spoil the teeth and make the breath fetid. An earthly yellowish substance, like rust, often forms on the teeth from want of cleanliness and also when they are not used to masticate; this substance corrodes teeth, just as rust corrodes iron. It is necessary to remove this substance with small instruments suitable for the purpose, and then the teeth themselves must be rubbed with a little *aqua fortis* and *aqua vitae* mixed together, to take away what the instruments have not been able to remove. In order to preserve the teeth it is necessary, besides, to rub the teeth frequently with appropriate dentifrices.

Among these the author mentions simple bread crust, burnt and reduced to powder.

Following Paré came Johann Jacob Wecker, a doctor of Colmar who published a valuable medical work in 1576. His single contribution to periodontia was that if one rubbed theriac, mithridate, angelica and zedoary on the teeth that these would prevent the plague. From this it may be assumed that he believed that cleanliness and disinfection of the mouth were good prophylactic measures against infectious diseases.

Giulio Cesare Aranzio (1530-1589) believed that those individuals whose gums had a peculiar weakness were affected by an inflammation of the gums when the wind was in the south.

Gerolamo Capivacci, of Padua, recommends in the mercurial treatment of syphilis that as soon as the action of the remedy manifests itself in the oral cavity, the patient keep a piece of gold in his mouth, that the mercury on account of its particular affinity, may unite with the gold and the harmful effects of this strange remedy on the mouth may be thus avoided. Mercurial stomatitis was at least being recognized and treated.

Peter Forest (1522-1597) advises as a means of cleaning teeth and keeping them free from tartar, the use of pumice-stone powder. He disapproves, however, of the use of vitriol—unless in very minute quantities of, at the very most, one or two drops.

Girolamo Fabricius (1537-1619) in his works states that there are seven principal operations necessary to be performed upon the teeth, as follows:

1. Forced opening of the dental arches in cases of prolonged constriction of the same, so as to prevent the patient from dying of hunger.
2. Cleaning of the teeth.
3. Medication of carious cavities.
4. Filling with gold-leaf.
5. Removal by resection of teeth abnormally situated.
6. Removal of any unevenness or sharpness of the teeth.
7. Extraction.

Regarding the second operation—cleaning —Fabricius states that

> it is designed to take away the dirtiness of the teeth and the bad odor of the mouth. The dental tartar must be removed by slender instruments of an appropriate shape, which, for people of high position shall be made of silver.

Fabricius, evidently, did very few dental operations or else he would have known that only hard steel will remove calculus.

> In the case of flaccidity of the gums accompanied by looseness of the teeth, the treatment must consist, first of all, in superficial cauterization with the red-hot iron, after which the gums must be smeared with honey, the mouth washed with mulse and lastly, astringent powders must be used.

> If the gums are much swollen, in near relation to the molar teeth, the use of the red-hot iron becomes very difficult from the want of space, and from the close vicinity of the healthy parts, which must not be injured. In such a case, it is necessary to remove, with suitable cutting instruments, as much as is possible of the morbid tissue; then to cauterize the remaining part, making the cautery, if necessary, pass through a tube, so that the surrounding parts would not be burned. When, however, the gingival swelling bleeds very easily and its excision might give rise to a profuse hemorrhage, it will be best to perform the operation with cutting instruments heated red-hot.

Fabricius remarks that although other authors do not make allusion to these large gingival excrescenses, he had had occasion to observe several cases, and had also had various instruments especially constructed for their cure.

Johann Heurne made no contribution to periodontology, but a review of his work is recited at this point so that it will be understood how many dental fallacies still persisted. His book, largely a compilation written about 1590, was full of errors and prejudices. He still held with Aristotle and Vesalius that women rarely have 32 teeth as do men. He still held to the theory that whether the pain resided in the gums, the dental nerve or the substance of the tooth that it was due to warm or cold matter, or dryness or humidity. His treatment was by means of purgatives, blood letting, revulsives, local narcotic or resolvent medicaments, and similar remedies. The letting of blood was, it seems, a very favorite method of cure; not only were the veins of the arm opened, but also those of the tongue, of the gums and of the ears. To free the teeth from tartar, Heurn advises oil of vitriol, diluted with other liquids.

The first signs of the separation of dental science from general medicine were to be perceived in the Sixteenth Century, the period in which, as we have seen, the earliest dental monographs appeared. From that time this separation tended to accentuate itself even more strongly; dental monographs became more numerous and dentistry progressed even more rapidly, both in its scientific and practical aspects. By the Sixteenth Century the total amount of publications to appear in Europe was about twenty. Included in this number were several pamphlets on the famous golden tooth. In the Seventeenth Century the number was considerably higher, that is, about a hundred.

Johann Stephan Strobelberger, physician to the imperial baths of Carlsbad, in 1630 published a very curious book the title of which translated from the German runs somewhat as follows:

> Complete treatise of Gout in the teeth, or, more properly said, of Odontalgia or toothache; in which are set forth, theoretically and practically, for the use of physicians and surgeons, the means of mitigating these pains, as well as the various modes of ably extracting teeth with or without instruments.

This book merits some interest, because it gives us a clear idea of the pitiful state of the dental art even as late as the first half of the Seventeenth Century, and shows us most clearly what enormous progress our specialty has made in a little less than two centuries. Strobelberger's monograph is a compilation of no great importance as to diagnosis and treatment. He makes only one interesting observation as to remedies which he recognizes as vain—that is as devoid of real curative virtue—he remarks that they nevertheless be useful by acting powerfully on the imagination of the sufferer, thus causing, in fact, the cessation of pain. This clear and explicit affirmation of the efficacy of suggestion in a book published 300 years ago is certainly not without interest at the present time.

Lazare Rivière's (1589-1655) contributions were his ideas of what a cleansing agent should be. His method of cleaning the teeth consists in rubbing them with a small stick immersed in sulphuric acid and afterward drying them with a piece of linen. This remedy not only cleans and renders the teeth white, but it preserves them from caries! If the teeth are very dirty, the

spirit of vitriol may be used pure, otherwise one mixes it with *mel rosatum* or water. Riviere, further, recommends tobacco ashes for cleaning the teeth, a counsel not yet given by any previous author. He also gives the formulae for two dentifrice powders, the basis of which is alum; he calls attention to the great importance of taking assiduous care to keep the teeth clean, and advises that after each meal the residues of food be removed from the interstices of the teeth and the mouth rinsed with wine.

Friedrich Ruysch (1628-1731), a professor at Amsterdam, confirmed a most important fact to which allusion had already been made by preceding authors, that is, the atrophy of the alveolar process following extraction or the falling out of teeth. Ruysch, however, makes the observation that atrophy of the alveolar process may also precede the falling out of the teeth, and might be the cause rather than the effect of it. In such cases the teeth, before falling out, always become more and more loosened, proportionately to the atrophic process. This pathological condition, against which none of the astringent remedies habitually used are of avail, is mostly considered, says Ruysch, to be due to scurvy.

Antoni Van Leeuwenhoek (1632-1723), also a Dutchman, was the first maker of powerful microscopes. It was he who discovered the tubular structure of dentine. In 1683, he discovered in the calculus scraped from between the teeth a form of microörganism upon which he laid special stress. This observation he embodied in the form of a contribution which was presented to the Royal Society of London on September 14, 1683. The bodies described by Leeuwenhoek which he took to be animalicules, were bacteria.

Tommaso Antonio Riccio in a book which came out in 1671 devotes six chapters to the treatment of the teeth and gums—one chapter on each of the following:

"1. On the relaxation of the gums.

2. Preparation for strengthening the gums and making the teeth firm.

3. On tartar and spots on the teeth.

4. Another preparation for whitening and preserving the teeth.

5. Mode of burning hart's horn, very necessary in preparations for the teeth.

6. "Water of salt," which makes the teeth white and is also good for ulcers of the gums."

It will be noted that five of these six chapters pertain to periodontal problems. He does not mention toothache, caries, prosthetic dentistry, nor extraction.

Carlo Musitano, a celebrated Neapolitan doctor (1635-1714), states that the treatment of loose teeth ought to vary according to whether this pathological condition depends on old age, or on scurvy, on syphilis, on superabundance of humors, etc. Sometimes in old persons, it may be useful to bind the teeth with gold wire, in order to prevent their falling out, but this operation must be very ably performed, otherwise it may give rise to inflammation.

Pierre Dionis (1675-1718), a celebrated surgeon and anatomist of Paris, in his *Anatomie de l'homme* divides dental operations into seven kinds. Two of the seven are of enough interest to be recorded: "The cleaning of the teeth" and "The use of the file." He advises the use of gold instruments if one is called upon to clean the teeth of persons of rank. It must be remembered that this was in the Louis XIV period of unbridled luxury when the nobles and those in power would have nothing in common with the lower classes.

Dionis' use of the file does not vary with other authors' ideas except that he advises against using the file to level down a tooth which has become lengthened through the loss of its antagonist, for after a certain time it would again project above the level of the others.

The author has attempted in this sketchy essay to record the findings which have a direct bearing upon what is now known as Periodontia, by the various men whose names have been mentioned. Some of the information has been taken from the books and monographs listed in this paper. A large portion of the material was taken from Guerini's *History of Dentistry* and Koch's *History of Dental Surgery.* No attempt has been made to extend the possibilities of this paper beyond the Eighteenth Century.[1] It is most interesting to note that nearly all of the periodontal procedures now used are to be found in one fashion or another in the records of these early dental pioneers.

1505 Medical Arts Bldg.

[1]See *J. Periodont.* 10(1):7-25. Jan., 1939; also 11(2):67-98. July, 1940, for records of other observers previous to the Eighteenth Century.—Ed.

Part Time Mouth Breathing and Periodontoclasia*

FROM time to time, I notice requests for information in regard to peculiar gum troubles not responding to the usual treatment.

Here are a few sidelights on this question that I accidentally stumbled upon in my practice and have been proving for several years. I am now able to diagnose and promptly cure many hitherto baffling conditions.

There are a large number of people who are part time mouth breathers. They breathe through the mouth only at night. Usually, these cases are of many years duration, probably from infancy. There may or may not be irregularities in tooth alignment, which always occurs in whole time mouth breathers.

In part time mouth breathers the upper part of the nose always has a pinched appearance, due to non-development through lack of use, while the fleshy part may flare more than normal because of unusual attempts to obtain the proper amount of air. There may or may not be marked pallor of the complexion. The upper hard palate is always markedly high, as though forcibly pushed up with the thumb.

In these cases one will always find the following conditions: inflamed gums, tonsils, and throat, patient subject to colds and inflammatory conditions of the respiratory tract, sinus troubles, eye, ear, and nose affections and an unbalanced condition of the entire system due to infection from improper breathing. The gums are always inflamed, usually badly so. White decay is always present. Neither diet nor oral hygiene will affect any of the conditions named, except temporarily.

The only way to effect a cure in any diseased condition is to find the cause, and remove it. The cause in these cases is improper breathing. I instruct the patient to tape the mouth with adhesive tape, the last thing at night, leaving a small loose end to readily strip it off in the morning. This must be worn for months and sometimes years to break the habit. But first, clean the teeth thoroughly. Prescribe whatever tooth paste or powder you consider best for the conditions and a mouth wash. After the last meal at night, instruct the patient to cleanse the teeth thoroughly, rinse slowly with a mouth wash and gargle the throat. Tape the mouth when ready for bed. Change the paste and mouth wash from time to time. It gives a new stimulus to the tissues. Look after the elimination. Don't overdose or try to rush a cure. It can't be done. However, with the coöperation of the patient, you will find a wonderful improvement in one week's time. The white decay will in time disappear. Old chronic coughs may disappear, the complexion clear, and the patient be greatly improved in health. All the case now needs is dental inspection from time to time. Everything depends upon the coöperation of the patient.

Many diseased conditions showing in the mouth are not of local cause and cannot be cured by local treatment.

At puberty in both sexes, there may be inflammation of the gums; marked chronic constipation will also cause gum inflammation; also a general run down condition of the system with excessive mental worry. Pregnant women are often afflicted with gum inflammation and some patients suffer severe pain and inflammation of the gums during menstruation.

1661 Pearl St.

*Communication from Carrie M. Gibson, D. D. S., Wichita Falls, Texas.

Arvah St. Clair Hopkins, D. D. S.

1894-1940*

In the death of Dr. Hopkins on August 17, 1940, the American Academy of Periodontology has suffered the loss of one of its most highly respected members. Born in Fernandina, Florida, in 1894, Dr. Hopkins removed with his family at an early age to Gulfport, Mississippi, where he was educated in the public schools. After graduation in 1912, he took up the study of dentistry at Vanderbilt University in Tennessee, from which institution he was graduated in 1916. Returning to Gulfport he at once entered upon the practice of his profession. Possessed of an active and inquiring mind and a most engaging personality, he was successful from the beginning. Very early in practice, he became interested in periodontia and soon became one of the leading practitioners of that specialty in the South.

The writer had the privilege of visiting Dr. Hopkins in his office only a few months before his death where he had the opportunity of observing his work and seeing several of the patients who had been under his care for several years. It was an impressive demonstration of sound judgment, skillful technique and highly satisfactory results. His enthusiasm in his work and his devotion to his patients knew no limit. In return, he had the confidence and esteem of those whom he served such as is given to but few to enjoy. His patients idolized him. Fees were of secondary importance. No one was denied his service because of inability to pay. To all who came under his observation he gave the same painstaking care, being more interested in the success of his work than the size of his fee.

Dr. Hopkins was more than a skillful practitioner. He was in every sense of the word, a good citizen and took a leading part in every civic activity in his community. For many years he was Commodore of the Gulfport Yacht Club and one of its most enthusiastic members. For ten years he was a director of the Chamber of Commerce and in 1931 was made president of the Kiwanis Club. In the City in which he spent most of his life, he was recognized as one of its most public spirited citizens. "Civic minded and public spirited" it was said of him editorially in a local paper at the time of his death, "Dr. Hopkins responded to every call for the advancement of the community. To Chamber of Commerce, service and social clubs, and church, he gave of himself with an open heart and willing hand."

Several years ago the writer had been attracted to Dr. Hopkins because of his personal charm and alert mind. He possessed a keen sense of humor, a boundless enthusiasm, and a refreshing outlook on life. His interests were many—professional, civic, intellectual, spiritual. He thought of life in terms of service and in conversation with friends he would discuss with the utmost freedom, his interpretation of its meaning and how it might be made more useful. To him life was a great adventure.

In his untimely death there has gone out of life, a rare and radiant personality. Something too has been added, something as imperishable as the stars in their orbits—the influence of a well spent life. This, no man can measure. Like a pebble cast into the ocean, its effect must go on in ever widening circles.

There shall never be one lost good! What was, shall be as before;
The evil is null, is naught, is silence implying sound;
What was good, shall be good, with for evil, so much good more;
On the earth, the broken arcs: in the heaven, a perfect round.

**An Appreciation by Arthur H. Merritt*

Editorials

Why the Decrease in Dental Students?

AT a time when the need for a larger number of dental practitioners was never more urgent, or the opportunities for constructive service more abundant, the dental schools of the country are confronted with a decreasing number of students. This is also true at a time when applicants for admission to our medical schools, far exceed the number that can be accommodated, as it does the number of physicians required to meet the needs of the public.

Why, it has been asked, should this be so? Is it because the standards for admission to our dental schools are too high, or is the cost of dental education out of proportion to the rewards? Or, may it be due to the present subnormal economic conditions? Doubtless all these play their part. Increasing standards for admission to our dental schools automatically limit the number of those who can meet the requirements. A lengthened course of training with increasing costs, acts to further decrease the number of students, as does a decade of widespread unemployment and business depression. These same conditions, however, have not affected the number of applicants for admission to the medical schools which meanwhile have increased to the point of embarrassment, and at a time when the need for more physicians was never less important. Nor can the cost of medical education in time, effort, and money be less than that of dental education.

These are but partial explanations of our problem. The main reason lies deeper than economics, increased standards for admission, or the confining nature of dental practice. It is to be found in the attitude of the public toward dentistry. It does not think of dentistry in terms of a learned profession or as offering an opportunity for widespread service. The reason is obvious. Dentistry is a young profession hardly out of its swaddling clothes. It has been recruited in the past (and to a certain extent that is true of the present) from a lower cultural and economic level than that of the older professions. Moreover, there is little in dentistry that appeals to the imagination. The issues of life and death are rarely joined in its practice. It is not spectacular. Its work is hard and confining and to the layman, doubtless appears monotonous and uninteresting.

When compared with medicine, (its nearest competitor), dentistry is at a great disadvantage. Medicine is an old and established profession with a long and honorable tradition. Its degree is regarded as a badge of honor, highly prized by its possessors and taken seriously by the public. On the face of it, medicine in all its branches, appears to offer a wider scope for the exercise of a scientifically trained mind. Its possibilities are greater. Its work is more varied and in many respects, less arduous. For these and other reasons, medicine attracts to itself, men of wealth, education and culture who would not for a moment consider the study of dentistry.

Dentistry is further handicapped by its separation from conventional medicine. Its contribution to the well-being of society is comparable in value to that of many of the specialties of medicine, but because it is practiced independently, it has never received the recognition which it deserves, nor the financial support

for education and research so urgently needed. Many of the present day specialties of medicine would, no doubt, suffer a similar handicap if separated from the parent body. The elaborate technical procedures of dental practice have conspired to bring about this separation, making it difficult if not impossible, to include dentistry in the present medical curriculum, as is the case with the other specialties.

These are some of the reasons which may explain the decreasing number of applicants for admission to our dental schools. How to meet the situation is less obvious. Education of the public regarding the possibilities of dentistry as a vocation; closer affiliation with medicine; improving economic conditions, should all be helpful in maintaining the balance between the dental needs of the public and the number and qualification of those required to meet it.

A. H. M.

A Valuable Record

"Books are the legacies that genius leaves to mankind . . ."—*Addison*

AMONG the books of interest to dentists and of recent publication is the remarkable and authentic record of the *Proceedings of the Dental Centenary Celebration* edited by George M. Anderson. It required nothing short of genius to compile a record of the Dental Centenary Meeting in Baltimore last March, so complete and comprehensive. It covers the meetings of the various sessions, general, scientific, historical, and public relations, and miscellaneous activities. It includes a generous report of the meeting of the American College of Dentists, and also the Historical Drama, "Wilderness" with much of its text and illustrations of stage settings, which was performed for visiting dentists and their families.

The last seventy-five pages are devoted to Dental History under the title of "The Foundations of Professional Dentistry" by J. Ben Robinson. This section alone would make the book an invaluable possession for dentists since the author attempts to throw some light upon the timely controversy as to dentistry's relation to medicine. Dr. Robinson states in his Preface, "By the use of pertinent facts the author has exposed the fallacy of the tradition that dentistry is an outcast among the specialities of medicine because of its alleged rejection of medical education. He has made clear that early in its history the highly technical procedures involved in the preservation, correction, and replacement of teeth erected an insurmountable barrier between the art of dental practice and the art of medical practice. This natural condition is the true cause of dental autonomy. Any attempt to remove the natural barrier that separates these arts will tend to destroy dentistry, since its special art of practice is too extensive, too highly specialized and too technical to be assumed successfully by the medical art." All dentists ought to be familiar with the findings of Dr. Robinson.

The *Proceedings of the Dental Centenary Celebration* is well and generously illustrated and presents a view of dentistry to be had in no other volume. Its contents are invaluable, especially to those who were unable to attend the Dental Centenary Meeting. The entire profession is indebted to all who in any way contributed to that inspiring meeting and especially to the Publication Committee who so ably recorded its proceedings.

G. R. S.

ABSTRACTS AND EXTRACTS OF CURRENT DENTAL LITERATURE FOR 1939 (Continued from 11(2). July, 1940)

(e) Symptomatology and Diagnosis

(Continued from 10(2):114. July, 1939)

316—Asbell, Milton B. and Humphries, William C.: **Tubercular osteomyelites.** *A. J. Orthodont. & Oral Surg.*, **25** (2):473-77. May, 1939.

Case is described of a tuberculous abscess in the median line of labial surface of mandible of a negro child. Treatment was by radical surgery with satisfactory outcome. Post-operative diagnosis was tuberculous osteomyelites of mandible with chronic sinus draining into the mouth. Microscopic diagnosis was tuberculous gingivitis.

—*C. R.*

317—Asbell, Milton B.: **Gangrenous stomatitis.** *A. J. Orthodont. & Oral Surg.* **25**(6):592-96. June, 1939.

An extensive case of gangrenous stomatitis with fatal termination occurred in an individual with history of poor health over a long period. Onset of fatal attack came with small area at base of a loose mandibular tooth which progressed rapidly to marked uncontrollable general oral sepsis and parodontosis. Diagnosis, gangrenous stomatitis, hemorrhage from mouth, arteriosclerosis, general rheumatic heart disease and passive congestion of thorax.

—*C. R.*

318—Beck and Krieger: **Was leistet eine Intrakutanprobe mit Indophenol zur Pruefung des Vitamin C-Haushaltes?** How can subcutaneous injection of indophenol be used to test the vitamin C metabolism? *Dtsch. med. Wschr.* **34**:1939.

Since both of the pre-existing methods for studying the vitamin supply of the organism are ill-adapted to clinical practice, an attempt was made to test the reducing power of tissues through the direct injection of an indicator solution into the skin. Normally, decolorization of the injected dilute dichlorphenol-indophenol solution occurs in about ten minutes. In cases of insufficient vitamin C saturation of the body, decolorization time is prolonged. This simple test method is sufficient for a practical determination of vitamin C deficiency.

—*M. B.*

319—Bennholdt-Thomsen, C.: **Symptomatologie und Etiologie der Moeller-Barlowschen Krankheit.** Symptomatology and etiology of Moeller-Barlow's disease. *Med. Klin.* **5**:136. 1939.

The author remarks on the growing number of clinical syndromes of disease which are found to be due, to a greater or less degree, to vitamin C deficiency. The Moeller-Barlow syndrome, or childhood scurvy, is in the group of diseases due directly to vitamin C deficiency, and can be successfully treated by the administration of this vitamin. A typical case of the acute disease is described, with all its clinical symptoms, and its treatment. But it has long been known that, besides the typical, acute case of scurvy, due to avitaminosis C, there are large numbers of cases due to hypovitaminosis C; this pre-scorbutic form is much more frequently seen in Germany. From the dental standpoint, it is important to note that in the Moeller-Barlow disease, the gum is blood-red in the region of erupted or partially erupted teeth, and bleeds on pressure. The treatment of this disease consists in the administration of a diet rich in vitamin C, as well as of isolated vitamin C itself.

—*M. B.*

320—Blanquie, Raoul H.: **The practice of periodontia, past and present.** *J. A. D. A.*, **26**(8):1353-59. Aug., 1939.

The article presents a general view of the history and development of the practice of periodontia in California during the last 25 years. Blanquie deprecates the "illusionary ideas" of some of those on whom the dental practitioner depends for guidance in the basic sciences, and the influences in some dental colleges "tending to minimize and

even discredit the theory of oral focal infection." Summarizing he says, in part,

> Fallacies such as the reattachment theory have no place in the pursuit of professional practice. The theory, which has more than any other single fact impeded the development of periodontal therapy, can be considered only as a pure misconception of tissue reaction. . . . We are trying not merely to prolong the life of teeth, but also to remove potential sources of systemic infection. . . . To disregard or even attempt to minimize the potentialities of oral infection is to discredit dentistry's most valuable contribution to general health.

—*C. R.*

321—Breuer, K., and Hynek, L.: **Die Bedeutung des vitamines C für die Erkrankungen des Paradentiums.** *Cesk. Stom.* **7**:1939.

A detailed account is given of studies of vitamin C in urine according to the office-hour, or sick-bed, method of Gander-Niederberger, a method which depends on the reducing action of ascorbic acid on 2, 6 dichlorphenol-indophenol, whereby this blue substance is changed by reduction to its colorless condition. Thirty-one cases were studied, including gingivitis marginalis, stomatitis ulcerosa, paradentitis dystrophicans complicata, dystrophia disusa. Of these 31 cases, only five showed normal values of vitamin C. This method is not entirely complete, and findings are only to be taken for approximate values. These methods are enough for a gross orientation.

Before therapy is instituted in paradental diseases with vitamin C preparations, a test for the vitamin C content should be taken, in order that vitamin C should not be given in excess, or on the other hand, that it should be given in a sufficient quantity.

—*M. B.*

322—Breuer, K. and Kaldarer, H.: **Die Bestimmung der Ascorbinsaure im Blutserum nach der Methode Lund-Lieck bei Erkrankungen des Paradentiums.** Ascorbic acid analysis of blood serum, according to the method of Lund-Lieck, in diseases of the paradentium. *Cesk. Stom.* **7**. 1939.

The authors studied twenty-five cases of various forms of paradental diseases. Amongst these, ten were found to have normal values of 0.30 mg. % of vitamin C in the blood serum, ten had somewhat lower values, and five had values under 0.10 mg. %. However, there was no indication that vitamin C preparations should be administered in every case of paradental disease, and especially in paradentosis. If vitamin C deficit is established, this therapy is indicated in the majority of cases of paradentitis (according to the nomenclature of Weski) where inflammatory changes in the paradental tissues are involved.

Where paradentosis is concerned, in each case in which a vitamin C deficit is established, besides the administration of vitamin C there is also needed an improvement of occlusion. Functional changes in the paradentium cannot be corrected by the use of ascorbic acid; for it is not possible, through vitamin C or other internal therapy, to remove pockets and granulation tissue, or to correct drifting or loosening of teeth. In all cases in which no vitamin C deficit has been established, it is commendable to look for other possibilities of internal etiology in each specific case.

—*M. B.*

323—Cahn, L. R.: **Relation of oral pathology to clinical dentistry.** *J. D. Educ.*, **3**:215-217. Feb., 1939. Discussion **3**:307-312. (Apr., 1939) and **4**:50-51 (Oct., 1939).

This is the second article in the series titled "The Relations of Licensure and Dental Education." These articles, edited by C. F. Bodecker, cover a series of questions of interest to dental educators and examiners.

The following questions are discussed in this article:

1. What cells are found in the dental granuloma and what is the purpose of the presence of these cells?

2. Are strong antiseptics desirable in root canal therapy?

3. In what way may the dentist be of inestimable service in preventing cancer mortality?

—*H. L.*

324—Davidoff, S. M.: **Die Klinik der paradentalen Erkrankungen.** Clinic of paradental diseases. *D. Z. W.* **30**:687. 1939.

In this extensive article, the author has presented a very fine summary of all that is known about paradentosis today, according to the present level of research. Within these bounds, the anatomy of the gingiva is gone into thoroughly, in which the finer

structure of the papillae is taken into consideration. Concerning the changes in the condition of the mucosal surface, the author goes so far as to draw an analogy with the changes of the mucosa of the alimentary canal, and to recognize most paradentoses as a conditional partial symptom of chronic gastro-intestinal alterations. It is clear that the author consequently is led to treat it from this viewpoint in practice. The taking of the patient's full history must therefore assume a new aspect, as it has in the eyes of the author. Early diagnosis and care for hygienic conditions create the chief consideration for the safety of the result.

—*M. B.*

325—Deleau, R. L.: **La gingivite ulcér-membraneuse.** Ulcero - membranous gingivitis. *La Rev. Odont.* **7-8**:533. 1939.

After defining the affection, the author gives a short history of it and discusses general considerations: the importance of the condition, terminology used, usual classifications, specificity and infectiousness, and the importance of the age factor. He discusses the etiology from three viewpoints: predisposing factors, general and local causes, and dental doctrine. He cites Lebedinsky and Becher, who consider dental eruption (especially of the third molar) as the principle cause of this stomatitis, which Deleau only partly accepts.

There is a detailed description of the disease: appearance of the first symptoms, course of the infection, period of the condition, general symptomatology, and complications. This is followed by the pathological anatomy, including the gross appearance of the lesions, the extension and depth of the ulcerations, localization of the gingivitis and complications; the bacteriology is discussed, with a description of the fusiform bacillus and Vincent's spirochete. Deleau insists on a differential diagnosis with catarrhal, pseudo-membranous, and gangrenous stomatitides. The therapy consists of a prophylaxis treatment, general and local treatment; various medications used are given with their characteristics. Concluding, the author assures his colleagues of the advantages of potassium dichromate, and of the necessity for keeping in mind general therapy in treatment.

—*M. B.*

326—Elliott, S. D.: **Bacteremia and oral sepsis.** *J. A. M. A.*, **113**(8):724. Aug. 1939. Abstr. from *Proc. Royal Soc. Med.* **32**:719. May, 1939.

In his discussion of bacteremia and oral sepsis Elliott concludes that transient streptococcic bactermias are a frequent sequelae to dental extractions especially when the mouth is the seat of severe chronic gingivitis. Bacteria may also gain admission to the blood stream in such cases irrespective of operative procedures and probably as the result, in many instances, of minor degrees of gingival injury such as is produced by biting on a loose tooth. Acute apical infections do not appear to be especially associated with blood infection of this kind; the focus of infection is apparently effectively "walled off" by the associated inflammatory reaction. Of the two factors infection and trauma involved in the production of these postoperative bacteremias, infection appears to be the more important since, when it is marked, even slight trauma to the gums is sufficient to produce invasion of the blood stream. In the complete absence, however, of the type of trauma induced by the "rocking" of a tooth during its removal, extraction may be accomplished without producing a heavy bacterial shower in the blood. Usually these transient bacteremias produce no permanent ill effects, there is some evidence that, occurring in subjects with abnormal heart valves, they may lead to subacute infective endocarditis. Thirteen cases are reported in which the valvular infection appeared to result from a postoperative dental bacteremia. Such bactermias may be prevented by the reduction or elimination of infection and trauma. Complete elimination of gingivitis is difficult, although preliminary treatment of the margins of the gums by some measure such as cauterization, may lessen it and lead to a reduction of the postoperative bacterial shower. Similarly, by avoiding unnecessary manipulation of an infected tooth during its extraction the incidence or degree of blood infection may be decreased.

—*Copy*

327—Euler, H.: **Paradentose, paradentite, gingivite.** Paradentosis, paradentitis, and gingivitis. *Rev. de Stom.* **7**:576. 1939. (Originally in *Therapieder Gegenwart.* **6**:241. 1938.)

Paradentoses, which are not accompanied by inflammatory conditions, are senile atro-

phy, continuous eruptions due to absence of the antagonist, dystrophic phenomenon, deficiency of vitamins, and certain endocrine disorders, notably of the hypophysis. Among the paradentitis conditions, one must distinguish superficial marginal paradentitis and progressive or profound marginal paradentitis. The last is serious because it entails loss of teeth; it is often considered as a phenomenon of degeneration. On the contrary, superficial forms are very common.

The dentist, the physician, and the patient himself must collaborate in the treatment. In superficial paradentitis, it consists of removing the calculus, treating local inflammation and massage of the gingiva. In profound forms, radiographic studies must be correlated with clinical findings to decide on the correct method of treatment; the patient himself must systematically massage his gums twice a day for six minutes.

—*M. B.*

328—Fergusson, A.: **Periadenitis mucosa necrotica recurrens.** Abstr. from *J. A. D. A.* **26**:1920. Nov. 1939.

Periadenitis mucosa necrotica recurrens shows a predilection for the mucous membrane of the mouth. It occurs at all ages and seems to have a familial incidence. Small nodules develop on the oral mucous membrane. The lesion enlarges and becomes tender and, after about four days, sloughing begins. Healing takes place in from six to eight days with a soft grayish scar. Three theories have been suggested regarding the etiology of the condition: 1. It is associated with functional nervous disorders. 2. It is associated with thyroid dysfunction. 3. It may be of a paratuberculous nature. The treatment so far recorded has had little or no influence on the course of the disease.—*Brit. J. Derm. & Syph.*, 51:366, July, 1939.

JOSEPH VOLKER.

—*Copy*

329—Fuchs, Abner: **Allergy related to dental practice.** *D. Outlook*, **26**(11): 12-13. Jan. 1939.

In recent years the study of allergic conditions has included many oral conditions heretofore unexplained but now definitely considered allergic. Allergy manifests itself in various ways and may occur in the mouth as well as anywhere else in the body.

Before any treatment is instituted, all patients should be observed for allergic characteristics. Very often the information is volunteered by the patient or his physician, but certain dental inquiries should be included in the routine dental history. Most significant in the history of the patient is the occurrence of any major allergic manifestation such as hay fever, asthma, angioneurotic oedema, eczema, or vasomotor rhinitis.

Allergic processes occur in the mucosa of the oral cavity. The most familiar clinical form observed is the localized swelling on the lips, tongue, buccal or sublingual surface commonly referred to as hives.

Canker sores or apthae are another form of allergic reaction which is often noted in the oral mucosa.

Frequently the allergic process does not present any objective lesion. The reaction may manifest itself by such symptoms as burning, tingling, or itching of some part of the oral mucosa or by fetid breath or furred tongue.

Recently the study of allergy has been extended to include many cases of gingivitis, stomatitis, and some cases of Vincent's as allergic processes. If it can be shown that many of these stubborn disorders are the result of allergic reactions it can be readily understood why they do not yield to treatment solely by local measures.

Medico-dental coöperation becomes indispensable for successful treatment of allergic patients, since they require special management because of their unusual manner of reaction.

Extr.—*V. I.*

330—Goldstein, Harold: **Differential diagnosis: erythema multiforme and Vincent's infection.** Abstr. from *J. D. Res.* **18**:281. June, 1939.

Enough confusion between the diagnosis of erythema multiforme of the mouth and Vincent's infection exists to justify a differential analysis between the 2 diseases. Oral erythema multiforme is frequently diagnosed as Vincent's infection. The *sine qua non of* Vincent's infection is necrosis and sloughing of the interdental papillae, generally or in localized areas, with the gingival crests appearing as if cut off by scissors. In addition there is foul mouth odor, metallic taste, the marginal gingivae bleed readily and a positive smear for the 2 symbiotic

organisms of Vincent's infection. Erythema multiforme, on the other hand, presents many vesicles and bullae everywhere on the oral mucous membranes including the lips, and the lesions may be mistaken for areas of necrosis and slough. The crests of the interdental papillae do not have the appearance of having been clipped off by scissors. In most cases there are also some skin lesions present in erythema multiforme.

—*Copy*

331—Grosby, Jerome S.: **An accurate method of determination of alveolar bone resorption.** *J. A. D. A.*, **26**:1695-97. Oct., 1939.

Desiring to develop a more accurate determination of degree of alveolar bone change over a period of time, the following procedure was developed. The method possesses certain uncontrollable factors, but it does give a more nearly correct knowledge than can be gained by visual comparison of radiographs. The image of the tooth in the first radiograph is measured from apex to incisal edge (A) and again in the second radiograph (A^1). The alveolar bone is measured from a point at level of tooth apex to the alveolar crest (B in the first radiograph and B^1 in the second). Using a simplified formula: $\frac{A \times B^1}{B^1 \times A} = X$. X represents the percentage of actual bone change. This method helps to overcome guesswork associated with variation in the image due to differences in angulation.

Author's Abstract.

332—Kimball, O. P.: **The treatment of epilepsy with diphenyl hydantoinate.** *J. A. M. A.* **112**(13):1244-45. April 1, 1939.

In a clinical study of the treatment of epilepsy with diphenyl hydantoinate, general improvement was obtained in the majority of cases, but 57% of the patients treated for as long as ten months developed pathologic change in the gums. Some patients showed no gingival change after eleven months administration of this powerful anticonvulsant but in others there was definite hyperplasia associated with vitamin C deficiency soon after beginning therapy. A slight soreness was present at the outset which quickly disappeared except where oral hygiene was neglected, but following this a progressive gingival hyperplasia developed. The condition was not accompanied by soreness or hemorrhages but along with it the ascorbutic level of the blood serum decreased remarkably and even with the administration of large amounts of vitamin C the blood level did not rise perceptibly. The other usual systemic evidences of severe vitamin C deficiency were not found. The gingival hyperplasia directly paralleled the blood ascorbutic acid and condition seems to be associated with the treatment using diphenyl hydantoinate. Further studies are in progress.

—*C. R.*

333—Kleiser, O.: **Die akute myeloische Leukamie und ihre ersten Manifestationen in der Mundhohle.** Acute myelogenous leukemia and its first manifestations in the mouth. *Dtsch. Zahn, Mund. und Kieferheilk.* **8**:511. 1939.

The author describes four cases of myelogenous leukemia, giving in each case extensive case histories with illustrations and charts. Chronic and obdurate inflammatory, hypertrophic, or necrotic mucosal changes should lead to a thorough study of the patient, which ought to include: case history, examination of the mucosa, palpation of regional lymph nodes, and blood analysis. If the disease has thus been diagnosed, we ought to refrain from tooth extractions, since we know that not only eventual continuous bleeding can result, but also dormant myelogenous leukemia with resulting sepsis can be precipitated. The author then gives a detailed account of the oral symptoms of the disease, followed by its etiology, pathology, histology, diagnosis, prognosis and therapy. In conclusion, he remarks that bleeding, swollen, inflamed gingivae should be looked upon, not as an isolated phenomenon, but as a symptom of a systemic disorder in the sense of avitaminosis, or the beginning of acute myelogenous, lymphatic, or agranulocytic blood disease.

—*M. B.*

334—Kula and Bernard: **Observation on the contagiousness of fuso-spirillar symbiosis.** *L'Odontologie.* **3**: 1939.

On a certain day in the dental clinic, a seaman came in for treatment; he presented a painful suppuration of the gum around the right lower third molar. Right after him came a second, third, and fourth with the same ulceration. At the same time, three other seamen were admitted into the

medical clinic with amygdalitis ulcerosa. This sudden increase in cases of the same kind were due to fuso-spirillar symbiosis. Cure was effected in four to eight days. Contagiousness as a likely local cause was not the reason. There remains only the hypothesis of indirect contagion from proximity, but the intermediate carrier microbe is unknown. One might call this incident an "epidemic of disease of the third molars."

—*M. B.*

335—Palazzi, Prof. S.: **Die Intern-Untersuchungen bei Paradentosekranken.** Studies of internal conditions of paradentosis patients. *Dtsch. Zahn. Woch.* **3**:49. 1939.

The author gives a survey of the changes in the condition of the blood which are, in his opinion, related to disorders of the paradentium. In blood disorders such as pernicious anemia, anemia with hypertrophy of the spleen and poikilocytosis, etc., there is an abnormal change of the paradentium, definitely distinguishable from the normal and usual forms of paradentopathy; we must here distinguish the forms of acute character and those of chronic and slow development. In such cases, nothing can be accomplished without internal treatment, not neglecting, however, proper local therapy.

Prof. Palazzi then recommends the following course of therapy:

1. Thorough anamnesis, including all the diseases throughout the patient's life and his family history.
2. Capillaroscope is advised for a study of the gum and oral mucosa.
3. Condition of the skin should certainly be observed; similarly, all disturbances of endocrine glands must be studied.
4. Examination of the patient's mode of living; whether he is habitually a vegetarian or meat-eater, whether he drinks tea and coffee, or uses nicotine and alcohol, etc.
5. Analysis of feces and blood, and check-up on hematolysis conditions.
6. Above all, disturbances in carbohydrate and protein metabolism must be carefully studied.
7. To these may be added the study of fermentative and putrefactive processes in the intestine; and in those individuals who suffer from intestinal disorders, there should be a study made of the intestinal bacteria.

—*M. B.*

336—Query: **Xerostomia.** *J. A. M. A.*, **113**(21):1902. Nov., 1939.

A greatly debilitated woman aged 65, who has chronic gall bladder disease is suffering greatly from xerostomia (dry mouth). The tongue is quite red and beefy in appearance, the lips are cracked, and voice production or articulation is difficult owing to a dryness felt in the esophagus and mouth. The blood picture is normal. Xerostomia, or deficient salivary secretion, is an accompaniment of diabetes mellitus, diabetes insipidus, belladonna poisoning, severe fevers and nephritis . . . While the condition is rather rare, all too often no assignable cause is demonstrable. In the absence of a specific cause, symptomatic treatment is resorted to with indifferent results. Glycerin mouth washes sometimes give relief, and small doses of pilocarphine should stimulate the salivary secretion.

—*Copy*

337—Weski, O.: **Die Bedeutung der Roentgendiagnostik für die Paradentosebehandlung.** The importance of X-ray diagnosis in the treatment of paradentosis. *Dtsch. Zahn, Mund, und Kieferheilk.* **2**:118. 1939.

X-ray pictures can act as a means of orientation in the treatment of paradentosis; but the practitioner must not content himself with merely establishing the dental X-ray status of the patient. For a proper diagnosis and thereby to arrive at a correct mode of treatment, he should make a thorough analysis of all the isolated facts and a plastic reconstruction of the alveolar tooth sockets. On the other hand, X-ray findings must not lead to neglect of the clinical findings. If the dentist has orientated himself, through the use of gutta percha probes, as to the depth of the gingival pockets, and if all the articulation conditions and functional state of various teeth (established in the paradentosis status) are present, he will be astonished at what he can learn from roentgenograms. The author presents a detailed discussion of the classification of paradentosis types according to X-ray findings, and of the specific method of using X-ray in paradentosis.

—*M. B.*

338—Wullenweber, G.: **Paradentose mit Zahnwanderung bei Hypophysentumor.** Paradentosis with tooth migration in tumor of the hypophysis. *Paradentium.* **7**:154. 1939.

The patient, 62 years of age, presented a

familiar severe, hereditary anamnesis, with indications of an extra-pancreatic diabetes with simultaneous decompensated hypertonia of blood-pressure. Changes in the teeth—almost complete expulsion of an upper central incisor, which showed out between the lips, and shifting of the teeth one upon another—led to a diagnosis of a disturbance of the hypophysis. A survey of the cell turcica showed a diagnosis of tumor of the hypophysis. Diabetes, high blood pressure, disarrangement of skin pigmentation, and tooth migration were connected with dysfunction of the hypophysis. Diabetes of the father and one brother, pernicious anemia of the mother and one brother, must be related to the midbrain hypophysial system. The observation suggested that paradentosis and tooth migration had something to do with the anterior lobe of the hypophysis—a supposition, which observations led to, that mesial shifting of the front teeth occur in Simmond's disease, and further, the studies of Loos that in receding of the teeth, there is involved an increased function of the periodontal tissue-forming process in apical bone and cementum section.

—*M. B.*

339—Ziskin, Daniel E.: **Hypertrophic gingivitis.** *Am. J. Orthodont. and Oral Surg.* **25**(3):290-96. Mar., 1939.

Case is described of hypertrophic gingivitis in patient of twenty. It is especially interesting because of the duration of the condition (since early childhood), its non-inflammatory character, the systemic implications, and possibly etiology. Biopsies are essential in order that the nature of the hypertrophy may be determined. The findings here were suggestive of an endocrine imbalance which may have been more positive in childhood than at the present time. Microscope showed hyperkeratinization which gave rise to suspicion of an endocrine factor (estrogenic). Local medication was not indicated since enlargement was non-inflammatory but due chiefly to an excess of connective tissue. Treatment therefore was surgical reduction of tissue to improve unsightly appearance. Nineteen months after surgery, examination showed there had been some re-growth.

—*C. R.*

(f) Treatment

(Continued from 11(1):51. Jan., 1940)

522—Albanese, P.: **Alveolarpyorrhoe und Fokalinfektion. Ihre Klinik und Therapie.** Pyorrhea alveolaris and focal infection. Clinical aspects and therapy. Abstr. in *J. A. D. A.* **26**:1753. Oct., 1939.

Having explained by the use of clinical subjects the meaning of pyorrhea alveolaris, the author affirms its toxic, infectious and allergic nature, framing it in the long chapter on focal infection. He then summarizes the clinical and experimental progress made in the field of focal infection and reconfirms the necessity for a full consideration of it in the light of generalized medicine. In this connection, 250 cases of pyorrhea alveolaris are reviewed, with the deduction that another focus often joins with that of the oral disease. Examples of cases demonstrating respiratory or digestive disturbances due to allergic manifestations are cited and the connection with pyorrhea alveolaris is discussed. Demonstration of such a pathologic consensualism, which cleared up under autotherapeutic epidermal treatment for the allergic condition, is given, and eighteen more are mentioned which showed beneficial improvement. Furthermore, the author believes that his method of cure can profitably be extended to treatment of other diseases in which a combination of toxic infection and allergy exists. In conclusion, the necessity, especially in the severe cases of pyorrhea alveolaris, of completing the epidermal therapy and surgical remedy with the ablation of tartar deposits is suggested.—*Ztschr. f. Stomatol.*, 37:57. August, 1939.

VIRGIL D. CHEYNE.

—*Copy*

523—Allen, W. G.: **Occlusal rest relieves pain: An important adjunct in the treatment of pericoronal abscess.** *D. Survey* **15**(6):666-67. June, 1939.

A description is given for the construction of metal splint, cast of low-fusing metal. This is cemented on other teeth than the one involved (with pericoronal abscess) to prevent impingement of the opposing tooth on the inflamed tissue. Splint is set aside after trouble subsides to be kept in case of recurrence.

—*C. R.*

524—Althoff, W.: Ein Beitrag zur spezifischen und unterstützenden Interntherapie der Zahnfleisch—und Zahnbetterkrankungen. Contribution to the specific and accessory internal therapy in diseases of the gum and supporting tissues of the teeth. *Z. Rund.* **46**:1768. 1939.

Many cases of gum and paradental diseases, which have increased in number in recent years, have been found to be related to internal disorders—disorders of metabolism, and of the chemistry of the tissues and blood. But it has been found that there is no universal treatment of such diseases; successful treatment must be based on the particular etiologic factors involved. In cases where internal causes are operating, purely local treatment cannot lead to a cure.

Of the internal causes, the most important is vitamin C deficiency, which lowers tissue resistance, and allows infection and development of clinical syndrome. Conclusions are based on about 800 personal cases. Analysis of the urine was carried out according to the method of Prof. Greve. Dr. Althoff has used Redoxon, a form of vitamin C, in his treatment, and has obtained amazing results, using it as a specific therapy, or as an adjunct to local therapy. This therapeutic technique is described, and illustrated with many cases. Vitamin C acts as a physiologic cell tonic, and is a specific means of paradental therapy. It is an invaluable curative agent in all diseases of the oral mucosa.

—*M. B.*

525—Baer, M.: Peut-on traiter les maux de dents au moyen de preparations a base de vitamines? Can diseases of the teeth be treated with vitamin preparations? *Schw. Monat. f. Zahnheilk.* **11**:1086. 1939.

Dr. Baer, who is an ear, nose, and throat specialist, has combined his work in this article with that of the dentist. He discusses briefly the discovery of vitamins at the end of the nineteenth century, and gives the following as results of study of these substances:

1. Partial lack of vitamins (hypovitaminosis) is very common.
2. Since vitamins are inter-related, a rule of polyhypovitaminoses can be established.
3. Slight deficiencies do not always provoke clinical phenomena and they can be found in apparently healthy people, due to faulty customary nutritional habits.
4. Hypovitaminoses can be produced in spite of absorption of sufficient quantity of vitamins in those cases where body need is increased: as in infections, metabolic disorders, neoplasms, etc.
5. Methods for discovering vitamins are still inadequate.

From his own experience, the author has found that in otitis and after tonsillectomy, part of the pain is caused by deficiency in vitamins B and C; and that an increase in these vitamins is a very efficacious analgesic therapeutic method. In his opinion, there exist comparable conditions in dentistry; thus, it is possible to treat pain arising from extractions by means of vitamin preparations. This should also be the case in diseases of the teeth of rheumatic origin which affect the dentition. It is more than probable that the results based on observations in oto-laryngology will undergo appropriate modifications by dentistry.

—*M. B.*

526—Barkann, L.: A conservative surgical technic for the eradication of pyorrhea pockets. *J. A. D. A.* **26**(1): 61-68. Jan., 1939.

The conservative surgical technic here introduced combines the advantages of the conservative and the radical, with complete elimination of the infected granulation tissue within the pockets and a maximum conservation of the gingiva to maintain esthetic effects, even in advanced cases. The application of an anesthetic, preferably topical, in the treatment of the gingiva enables the operator to complete the task with greater thoroughness and with the comfort of the patient assured. Nupercaine 2% is here employed. A combination of phenol 25 per cent and camphor 75 per cent is used on cotton strands to disinfect and cauterize granulation tissue before and after excision. Stronger solution of phenol and camphor 50 per cent of each, also, pure phenol on strands may be used. The pocket lining is excised with small, sharp knives designed for this purpose after coagulation by phenol, and the pocket is packed with a

¼ inch gauze dressing, to remain for a day. Occlusal surfaces are not ground before or during operation. If the prognosis was good, the results of the treatment almost invariably preclude grinding. Instead, the loose teeth are immobilized by ligation to immobile teeth with metal ligatures, which permits uninterrupted regeneration of supporting tissues. Formulae and operative aids are appended.

—*Author's Abstract.*

527—Berblinger, W.: **Ueber die Bedeutung der Hormone und der Vitamine für die Stomatologie.** The importance of hormones and vitamins for stomatology. *Schw. Mschr. f. Zahn.* **12.** 1939.

Berblinger explains fully the chemistry of these substances, and the foods in which the important vitamins are found; the article is well illustrated with tables and instructive pictures, and is an extensive and thorough study of the subject. Diseases of the teeth, jaw bones, and oral mucosa due to vitamin A deficiency are discussed. Changes of the gingiva in scurvy are described, where vitamin C deficiency is the etiologic factor; the treatment consists of administration of Redoxon, which is of value even in non-scorbutic gingivitis. The author deals also with the treatment of bleeding of the edges of the tongue, treatment of Hunter's glossitis, of paradentosis, etc. This very valuable work of Berblinger, gives the dentist and physician a thorough review of the properties of hormones and vitamins.

—*M. B.*

528—Beube, Frank E.: **An experimental study of the use of sodium sulphid solution in treatment of periodontal pockets.** *J. Periodont.*, **10**(1):49-56. Jan., 1939.

The histological studies of the effects of sodium sulphid solution on the gingival tissues, both in vitro, and directly in the periodontal pocket, show that the destructive effects of the solution are due almost entirely to its strong alkalinity and are largely dependent on the sulfhydryl and sulphid ions which are present in the sodium sulphid solution. This follows from the finding that all but one of the effects observed with sodium sulphid were obtained in equal degree with a solution containing sodium hydroxide in place of sodium sulphid and having the same pH, 11.4, as the sodium sulphid solution. The exception consisted in the fact that the corneal layer of the outer epithelium was more markedly affected by the sodium sulphid solution. It is therefore evident that only the extra effect on the corneum of the outer epithelium can be attributed to the sulfhydryl and sulphid ions.

The alkaline sulphid solution as employed destroys only the superficial layers of the epithelium, leaving the prickle and basal cells largely intact. Hence the principle upon which the use of the sodium sulphid solution is based—to obtain complete disintegration of the pocket epithelium in order to facilitate its removal and obtain reattachment of the connective tissue to the cementum—is unfounded. The sulphid solution had a more marked effect only on the corneal layer of the outer epithelium. This effect is of no value since there is no corneal layer in pocket epithelia. Since the sulfhydryl and sulphid ions themselves do not appreciably affect the non-cornified pocket epithelium, its use in the treatment of periodontal pockets, appears to be irrational as well as ineffective.

—*Author's Abstract.*

529—Beyerler, K.: **Funktionelle Behandlung der Paradentose.** Functional treatment of paradentosis. *Paradentium.* **9**:170. 1939.

Dr. Beyerler's article deals with a functional course of treatment of paradentosis—restoration of proper occlusion. An extensive outline of the entire method of procedure is given, including diagnosis and the mechanics of constructing the various types of braces. Illustrations.

When the patient lacks an anatomically ideal bite due to lack of physiological abrasion, the dentist must correct this by artificial abrasion. The establishment of a many-point articulation must be attained. This course of therapy is, as its name indicates, a purely functional approach to the cure of paradentosis; it takes no accounts of any possible internal factors as the cause of the disease, nor does it include any internal treatment.

—*M. B.*

530—Biaggi, D.: Paradentose: Ätiologie, Therapie, und Prophylaxie. Paradentosis, its etiology, therapy, and prevention. *Z. Rundsch.* **10.** 1939.

After recalling that most of the cases of pyorrhea can be attributed to defective functioning of the masticatory apparatus and to a poor adjustment of forces, the author states the following principles:

1. Paradentosis cannot be cured without re-establishment of functional harmony.
2. Internal treatment by itself cannot lead to a cure.
3. Local treatment of the gingiva cannot lead to a cure.

Dr. Biaggi thinks that inflammatory modifications of the paradentium do not arise from internal disorders, but that functional disorders can lead to such inflammation. These functional disorders must, above all, be correlated, without losing sight of the fact that the dentition and masticatory apparatus form a unit. Local gum treatment should accompany methods to re-establish articulatory equilibrium.

The author remarks that no treatment at present, can lead to a *restitutio ad integrum;* this gives added importance to preventative care to maintain or re-establish functional harmony, before the paradentium has suffered from disruption of equilibrium and inflammation has been produced.

—*M. B.*

531—Blass, J. L.: Twenty-five years of pyorrhea cures. *D. Outlook.* **26**(2): 65-76. Feb., 1939.

The variety of substances and methods used in the past twenty-five years in the treatment of pyorrhea are discussed.

A comprehensive survey is made of the drugs and physical therapy methods used. Under fourteen subdivisions ranging from antiseptics to vaccines, sixty-one drugs or methods are tabulated. Of these, thirty-six are antiseptics or intended to raise resistance, and twenty-five are used to eliminate periodontal pockets. In addition, a list of drugs and formulas useful in periodontal practice is appended. A bibliography of eighty-three references completes the article.

Some of the conclusions drawn are:

1. Many drug treatments are effective only because of the auxiliary mechanical procedures advised by their originators.
2. Since bacteria are known to be secondary factors in the etiology and prognosis of periodontal disease, empiricism in the use of drugs and techniques in an attack on bacteria is unsound periodontal practice.
3. Some formulas, in the guise of harmless aids in treatment, may actually belong in a more harmful category.
4. The excessive or improper use of an otherwise beneficial drug, food or mechanical procedure may injure periodontal practice.
5. Drugs properly chosen and used as adjuncts in selected cases, facilitate the progress of various mechanical procedures comprising periodontal treatment, but chief reliance should not be placed on their use.

—*Author's Abstract.*

532—Bremner, M. D. K.: Frauds and fads in the treatment of pyorrhea, *D. Items Interest,* **61**(1):39-44. Jan., 1939.

This article constitutes Chapter XXVI in Bremner's book, *The Story of Dentistry.* After a brief history of so-called pyorrhea up to the middle of the nineteenth century the work of Riggs is given more detailed attention. Younger's fame rests on his observation that "correct treatment is followed by reattachment of the gums through the obliteration of the pockets." Following this the Carr system is considered at some length, several paragraphs being devoted to his methods and especially his instruments and the controversy concerning them. The Council on Dental Therapeutics is credited with exposing and thus suppressing the use of many fraudulent remedies claimed to be pyorrhea cures. Vaccines and emetine treatments were honest and sincere efforts, though misguided; but the vapor method (Dunlop) had no scientific foundation, in the author's opinion. (cf. an opposite view in *J. Can. D. A.* 6: Editorial pp. 351-353. July, 1940; also condensed article pp. 347-48). Bremner feels that progress in periodontia since the days of Riggs has not been encouraging.

—*C. R.*

533—Bucher, A.: **Verhutung der Zahnkaries in der Schwangerschaft und Stillzeit.** Prevention of caries in pregnancy and the nursing period. *Munch. med. Wschr.* **19**. 1939.

The normal daily vitamin C requirement is 50 mg.; during pregnancy, the minimum daily requirement is 100 mg. and 300 mg. is the maximum. Thus, the vitamin C requirement during pregnancy is twice to six times the normal; this is for the normal pregnant woman, and it is still higher if a complicating illness, such as the grippe, should intervene. The potato is the main and cheapest food with which the vitamin C deficit can be covered. Both urine and albumen analysis of vitamin C should be used in establishing the level in pregnancy.

Of 25 women who were controlled through vitamin C saturation, from the beginning of pregnancy until childbirth, the following conditions were observed:

1. No sound tooth became carious.
2. In the wide majority of cases, devitalized and filled teeth were preserved.
3. Toothache and subjective discomforts in the jaws, gingivae, and teeth disappeared in the first days of vitamin C administration.
4. Edema only occurred in a slight degree during the summer months, and in some cases not at all.
5. No anemia observed in any case.
6. Sick patients suffered much less in general fatigue, rheumatic pains, and back ache.
7. During the damp cold months, they suffered less from colds.

These results are interesting not only in themselves, but also in connection with pregnancy gingivitis and its treatment with vitamin C.

—*M. B.*

534—Cashman, Montague A.: **Inter-radicular abscess: Case report.** *J. A. D. A.* **26**(10):1758-59. Oct., 1939.

A case presenting an inter-radicular abscess is reported in a young woman with masked symptoms. The treatment and prognosis are discussed. The abscess was located eight mm. above the gingival margin, by means of an exploratory-flap operation. The abscess was removed by curettage, and the field sutured with a drain in place. Healing was slow, but satisfactory, in view of the fact that the patient was diabetic. It is also explained how the diabetes was controlled during the surgery, and postoperatively.

—*Author's Abstract.*

535—Chalier, J. and Ladru, J.: **Traitement des angines et stomatites a pheumocoques par les applications locales de bile de boeuf sterilisee.** Treatment of pneumococcic angina and stomatitis by local applications of sterilized beef bile. *Le J. Med. de Lyon.* **456**:13. 1939.

The authors have applied clinically the property of bile in preventing growth of pneumococci on culture medium, and its bactericidal action on this organism. They report on three cases of pseudo-membranous angina and two cases of pseudo-membranous stomatitis, in which cultures showed the presence of pneumococcus; in these cases, the treatment was used successfully. After spraying with seltzer-water and a mouth wash of bicarbonated water, the tissues were painted with a sponge soaked in sterilized beef bile. This treatment is very disagreeable, at least at first.

The applications of bile were followed by a rapid fall in temperature, the throat cleansed itself, and the buccal lesions receded in a variable, but short time. According to the duration and extent of the lesions, evident improvement was obtained in one to three days, complete cure in two to five days. The functional symptoms improved quickly, but the adenopathy persisted. This therapeutic method is of use in certain particularly tenacious anginae or stomatitides of the pseudo-membranous type due to pneumococcus.

—*M. B.*

536—Chapman, E.: **Photography tells a story.** *D. Items of Interest.* **61**(8): 751-59. Aug., 1939.

Effects of electro-coagulation for pyorrheal pocket removal are shown by a number of significant illustrations with explanatory notes. Author uses

a combined coagulation and oscillation effect—all in one—with precision adjustment for amount of each desired—in one blend . . . The real, future electrical technique will be: The combination of (1) oscillation current plus (2) ultraviolet radiation and (3) ionization (———) for a deeply induced medication using zn, cu, mg sulphate and the iodine formula.

—*C. R.*

537—Classen, H.: **Zum Thema: Paradentose-Therapie bei jüngeren Patientin.** Paradentosis therapy in a young patient. *Z. Rund.* **16**:659. 1939.

Dr. Classen describes his treatment of a case of paradentosis in a 31-year-old man. He presented a typical picture of paradentosis; since all subjective discomforts were absent opposition to treatment was encountered, but treatment was initiated, nevertheless. It was started with the removal of calculus deposits; then followed cauterization of gingival pockets, and gum massage which was augmented by the patient himself using Cebion paste. The patient was skeptical of the whole therapeutic method, at first; after several visits, however, when he himself noticed the beginning of firmness of the gums and a feeling of cleanliness in the mouth, his attitude changed to one of interest and helpfulness.

Then, braces were put in both jaws, according to the method of Elbrecht, which tended to strengthen the whole denture. In spite of inconvenience for him, the patient realized its importance and became accustomed to it. The author states that he has had good results with this brace technique, and the patients become used to them, so that discomfort disappears. He concludes with the admonition that if a patient is in full accord with the therapeutic treatment and realizes he must have an attitude of submissiveness, that in itself aids in cure.

—*M. B.*

538—Correspondence—(Paris): **Vitamins in the prevention of pellagra.** *J. A. M. A.*, **112**(20):2075. May 20, 1939.

The pathogenesis of aphthae is unknown. Professor Cachera at a reunion of the Societé Medical des Hospitaux of Paris reported satisfactory results from the administration of nicotinic amines and nicotinic acid in the treatment of this disease. Cure took place in a few days in several cases in which the condition had been refractory to other treatments. The speaker wondered whether aphthae is an atypical form of pellagra. It is possible that the satisfactory results induced by administering liver extract in the treatment of aphthae may be due to the nicotinic acid amines present in the extract. A case described suggests a possible connection between aphthae and pellagra in their relation to avitaminosis.

—*C. R.*

539—Correspondent re: **Trench mouth.** *Brit. D. J.* **67**:41. Dec. 15, 1939.

The correspondent emphasized the value of use of the toothpick in prevention of "Trench Mouth" in soldiers of the present war.

When trench mouth does appear it is possible to control it by packing the interdental spaces thoroughly, but gently, with a dressing of zinc oxide and oil of cloves on cotton-wool. The whole gum margin is covered with masses of the dressing lingually, bucally and interdentally to prevent spread of the infection. The tissues thus protected from injury and the traumatic spread of infection will heal in forty-eight hours.

Use of the toothpick should be delayed until all signs of active disease have vanished. The only guarantee of a permanent cure lies in subsequent daily wood point drill.

540—Davis, W. Clyde: **Reattachment following periodontoclasia.** Abstr. *J. A. D. A.* **26**:1406. Aug., 1939.

In the treatment of periodontoclasia affecting single-rooted teeth, we may well expect a large percentage of replacement of destroyed bone and a reattachment of the soft tissue at the cervix, under proper treatment. This treatment has its foundation in the application of Nature's methods of healing wounds. It is termed "the blood induction method."

All traces of tartar deposits must be removed with as little injury to the cementum as possible. Several medicaments are then used to destroy the foreign tissue on the flesh side of the pocket. No surgical procedures are employed on the bony margins, as this causes the formation of scar bone, Nature's way of closing the case.

All medication is now discontinued and, on visits two or three days apart, the pocket is washed out with normal salt solution, the area around the case is packed with cotton rolls and the pocket is dried. A small explorer with a right angle turn of about 1 mm. is passed to the bottom of the pocket and turned into the flesh, a hemorrhage resulting. The blood is allowed to well up about the tooth and the excess is wiped away. The mouth is kept packed till the blood clots. The patient is dismissed with instructions not to massage the gums or use a toothbrush for two or three days, when he is to return for the blood induction treatment.

The blood clot is Nature's assistant in filling the cavity with bone as after extraction.

Surgical measures and astringents are not used in this method. Caustics or electrocoagulation is used for one or two sittings, followed by mild stimulants. All medication is then discontinued and the case closed with the blood induction method.

The condition is not unlike a dry socket following extraction, and bone regeneration and closure of the pocket is governed by the same laws. With the molar teeth wherein the interlined space has been reached, there is little hope for repair, as the removal of all deposits is seldom accomplished.

I prefer the therapeutic treatment for the removal of foreign tissue in the pocket first, and the removal of subgingival deposits second, injuring the cementum as little as possible. When the cementum has been removed, it is a much longer process for Nature to build a new layer of cementum.—*W. Clyde Davis, D.D.S., M.D., 814 Security Bldg., Lincoln, Nebr.*

—*Copy.*

541—De Queiroz, D. P.: **Les stomatites auriques.** Stomatitis due to gold. *Tribuna Odontologica.* **4.** 1939.

The dentist can and should give efficient collaboration to the phthisiologist. All gold treatment should be preceded by a dental examination. The gravity of mucosal manifestations depends in large measure on the condition of the mouth; when this is not as good as would be desired, treatment encounters a series of difficulties. Climate and intolerance are principal causes which determine gold stomatitis. It must be remembered that bucco-dental lesions can pass unseen not only by the phthisiologist but also by the patient. The means of administration or the nature of the salt used in treatment has no effect on the stomatitis. Tuberculosis being a social and economic evil against which all active forces in the country are necessary, it cannot be understood how the dentist could keep out of the fight against this public enemy.

—*M. B.*

542—Dinslage: **Einen bemerkenswerten Heilerfolg bei Paradentose.** A noteworthy cure of paradentosis. *Z. Hippokrates.* **43.** 1939.

Dr. Dinslage, who is not a dentist, consulted a dentist some time ago about his teeth which were becoming increasingly loose. The treatment did not satisfy him, since it seemed to be symptomatic. Dr. Dinslage had read somewhere, that oats were good for paradentosis; he therefore ate breakfasts of oats: oat flakes, bees' honey, and a yeast extract were cooked together to form a porridge. A few days after beginning this paradentosis cure, he noticed that his teeth were again firm. In the course of time, he could eat even the hardest foods. According to this communication, it consisted of not merely a temporary, but actually a lasting result. Dr. Dinslage asks that his assertion be tested.

—*M. B.*

543—Fasoli, G. and Hoffer, O.: **Influence of vitamin C on coagulation of blood in relation to clinical evolution and treatment of gingival hemorrhages.** *Stomatolog. Italiana.* **1**:411-508. May, 1939. Abstr. in *J. A. M. A.* **113**(8): 726. Aug. 19, 1939.

Fasoli and Hoffer obtained satisfactory results from the administration of vitamin C in the treatment of acute hemorrhagic gingivitis. The patient had a daily allowance of 0.03 or 0.04 gm. of vitamin C, which was administered by the oral route up to complete disappearance of the inflammation and of the hemorrhage, which took place in from five to eight days. The time of coagulation of the blood was determined before and one day after administration of the first dose of vitamin C and again after completion of the treatment. The determinations of the coagulation time were made on the gingival blood. The authors found that the treatment controls the disease. Local hemorrhagic conditions probably depend on disturbances of the local capillaries. The vitamin C treatment controls the general hemorrhagic tendencies by controlling hypo- vitaminosis C and by regulating the time of coagulation of the blood, whereas it controls the local hemorrhagic disorder by making normal the nutritional conditions and resistance of the capillaries without interfering with the time of coagulation of the blood.

—*Copy.*

544—Griebel, C. R.: **Hypovitaminotische Zustandsbilder an Zunge und Mund-**

schleimhaut und deren Behandlung. Hypovitaminotic conditions of the tongue and oral mucosa and their treatment. *D. Z. W.* 11. 1939.

In the therapy of glossitis superficialis, Griebel proceeds from the idea that subjective symptoms of burning tongue are due to neuritis of the lingual or glossopharyngeal nerve, which ought to be treated according to the experiences of neuritis therapy, through large doses of vitamin B_1.

Apoplectic improvement was first obtained through intravenous doses of Redoxon and Benerva in a mixture; then, subjective complaints were improved, and through further administration, the inflammatory symptoms were also corrected. The cause of glossitis superficialis must be interpreted as a vitamin deficiency disease, in which water-soluble vitamins B_1 and C are missing, either in supply, or because of insufficient absorption. Therapy advised is a combined treatment with vitamins B and C.

—*M. B.*

545—Herlitz, C. W.: **Investigations of vitamin C standard in healthy children and in children suffering from gingivitis.** *Schw. Monat. f. Zahn.* 3:283. 1939.

For this study, the author observed, with very exact diagnosis, children with gingivitis, who were otherwise healthy, and children who were healthy and showed no gingivitis. He used his own modification of the Lund-Lieck method for determination of ascorbic acid in the blood. The value of ascorbic acid in the blood rose proportionally to administration of vitamin C in the diet. Dr. Herlitz does not speak in favor of the probability that gingivitis is connected with a deficiency of vitamin C. Very low blood values can be brought up to normal in three weeks through the addition of small quantities of fruit to the normal diet.

—*M. B.*

546—Hoever, R.: **Zur Chirurgischen Behandlung der Paradentose nach Kirkland und MacFarland.** The surgical treatment of paradentosis, after the method of Kirkland and MacFarland. *Z. Rund.* 7:264. 1939.

A description is given of Kirkland's "flap-method" of surgery. Either local or regional anesthetic can be used. Asepsis is of extreme importance in the operation, both in the mouth of the patient and on the part of the dentist himself and his instruments. Two flaps are made in the gingival papillae, labially and lingually. The tissue is lifted up, and all granulation material and calculus are removed. The whole field of operation is covered with gauze, and both flaps are brought back and sewed down. Gauze compresses, soaked in warm sterile water are applied; then sterile wax is put on, and left for 3-5 days, until the gingival tissue has partly healed. Kirkland has used this operation for 12 years and obtained good results.

The gingivectomy of MacFarland is best done in five parts, according to MacFarland himself. Before curettage, all hypertrophic growth of the gingival tissue is removed. A cut is made over the alveoli on both the lingual and labial surfaces, including the interproximal spaces, and all granulation and calcareous deposits are removed. Packing, called "Wonderpak" is put on the labial and lingual surfaces, and left about ten days, or better still, 14 days. The treatment after this is the same as in the Kirkland method.

—*M. B.*

547—Hulin, M.: **Sur la technique médico-chirurgicale dans les paradentoses pyorrhéiques.** Medico-surgical treatment of pyorrhetic paradentosis. *L'Odontologie.* 4:213. 1939.

The author discusses briefly the terminology of paradentosis and alveolar pyorrhea, and various opinions on their differentiation. A distinction should be made between an inflammatory condition of the paradentium and that of alveolar atrophy. Also, atrophy and resorption in an older person is different from the same condition in a young person. Hulin discusses the question of allergy and sensitivity to certain substances. (He has succeeded in making animals sensitive to their own saliva.) When albumin cannot be broken down, or cannot be eliminated through the usual channels, the organism seeks to eliminate it through other paths, depending on the constitutional predisposition of the organism. The mechanism of phosphatase is also discussed.

Method of treating paradentosis:

1. Desensitizing the oral mucosa.
2. Removal of granulation tissue around the teeth, which becomes a focus for collecting septic material.

3. Condensation of paradental tissue by fibrosis; the author uses radium for this.
4. Remineralization of the alveolar region by the use of phosphatase; then, functional restoration is performed.

—*M. B.*

548—Jeanneret, M.: **L'attelle fixe en paradentose.** Fixed splint in paradentosis. *Schw. Monat. f. Zahn.* **1**:27. 1939.

The problem of the fixed splint is complicated; it involves mechanics, pathology, and technique. The forces which tend to disclose the tooth work in the direction of the long axis of the tooth; similarly, the brace which is attached to oppose these forces is more effective the farther it is from the cervix. Therefore, fixation must be made along the incisal and occlusal surfaces.

The author has constructed a mechanical device for fixed splints which he calls the "Isodrome." He describes its construction and use in great detail, and with illustrations. "Isodrome," with moderate difficulties only, and a minimum mutilation of the teeth, allows the construction of fixed splints which are simple and effective, and which, without this device, could not be achieved. This is only one of its possibilities; in other fields, it has proven equally efficient.

—*M. B.*

549—Jonas: **Auschnitte aus der Paradentosebehandlung.** Excerpts from paradentosis therapy. *Dtsch. Zahn. Wochrft.* **30**:685. 1939.

Paradentosis therapy is divided into three groups:

1. Treatment without apparatus, or operation.
2. Treatment with splints.
3. Surgical treatment, with or without splints.

Dr. Jonas reviews these various methods and their respective merits, giving his own experiences and that of others. He concludes by saying that prevention of the disease begins in young children; that good results are obtained only when there is coöperation and understanding between the dentist and the patient, since the finest surgery and splints are of no avail if the patient will not practice oral hygiene and watch his diet, or if the dentist does not regularly check up on the case.

—*M. B.*

550—Jugel, H.: **Über die Verwendung von Argolaval in der Zahnheilkunde.** The use of Argolaval in dentistry. *D. Z. W.* **45**:954. 1939.

Dr. Jugel discusses the use of the preparation Argolaval in dentistry, as a substitute for silver nitrate which blackens the teeth. Argolaval is silver-hexamethylene-tetramin-nitrate. In its action it is entirely painless, does not stain or color the teeth black. In stomatology, Argolaval is applied in part in liquid form, and in part in paste form, and is used especially in the following diseases: gingivitis marginalis atrophica, hypertrophica, and hemorrhagica; stomatitis simplex, ulcerosa, and aphthosa; also, in the treatment of ordinary wounds, and wounds after cauterization. In all stomatitides, Dr. Jugel has used only the liquid form, and he gives directions for its use in each case.

Argolaval is also used in the treatment of teeth in paradentitis, alleviation of pain in the dentin of a cavity, and in the sterilization of root canals. The author gives detailed account of the specific therapy with this preparation in each case; and here he uses both the liquid and paste forms.

The paste has a light blue fluorescence, while the liquid form shows no fluorescence; because of this fluorescence, the distribution of the paste on the gingiva can be easily observed, and it is therefore easy to use. The paste is much more easily applied to the dry gum than to one coated with saliva.

In conclusion, the author states that Argolaval is a superior substitute for silver nitrate, and gives better results; it can also be used in many more conditions than silver nitrate could formerly be used.

—*M. B.*

551—Jung, O.: **Beitrag zu einer neueren Behandlungsmethode von putriden Zahnen mit Vitamin C-Kaffeekohle.** Contribution to a new method of treating devitalized teeth with vitamin C and coffee charcoal. *D. Z. W.* **38**:849. 1939.

Dr. Jung states that for the past eighteen months he has successfully treated severe gingivitis and paradentitis with coffee charcoal applications combined with vitamin C injections in cases of deficiency. In this article he describes a new therapy: a mixture of vitamin C and coffee charcoal was prepared which has produced good results in various kinds of inflammatory conditions.

He then cites four cases; one case, that of a type of angina, is described in great detail, and here an almost unbelievable cure was obtained by this new therapy. In future cases, the author intends to use vitamin D in addition.

—*M. B.*

552—Kammerer, J.: **Die Bedeutung des Gebissverfalls, und die Wege zu seiner Heilung.** The importance of the loss of teeth and the method of cure. *Hippokrates.* **28, 29.** 1939.

There is a progressive increase of caries and paradentosis, and while knowledge of the relation of these diseases to general health is beginning to attain some significance, on the other hand a clear basis for successful treatment is lacking. It will be remembered in this connection that the problem of root therapy in its importance to the tooth and the meaning of infectious paradentium to the whole organism have not received enough consideration. Because of secondary effects of teeth lost on the masticatory apparatus, a radical treatment of foci of infection is desirable, and in this, the author supports the work of other investigators, such as Fischer, Bircher, Slank and others.

In conclusion, new ideas on the etiology and therapy of paradentosis are discussed. In C-hypovitaminosis there is a need for changing habitual eating habits. Deficiencies in foods disorganized and denatured, too poor in vitamins and minerals and too rich in proteins and carbohydrates, produces a damaged blood, which then circulates through all the blood vessels in all tissues and organs, including the tooth pulp.

—*M. B.*

553—Köhler, H. J.: **Die Behandlung der ulcerösen Stomatitis; Gingivitis unter besonderer Berücksichtigung der Vitamine.** Treatment of ulcerous stomatitis; gingivitis, with special consideration to vitamins. *D. Z. W.* **6:128.** 1939.

Formerly, gingivitis was treated only locally, often with poor results; it is only since this condition was found to be connected with internal disorders and treated accordingly that progress has been made. Today, dentists consider that there is no purely exogenous inflammation of the oral mucosa, and so there can be no "primary" inflammation; in all cases, there are other factors than the exogenous.

The first step in treatment is compilation of a full case history of the patient. Then, a determination of the vitamin C content of the urine is made. Therapy is along three lines: local antiseptic treatment, removal of calcareous deposits, and general treatment. The following precautionary measures are taken: the patient is forbidden smoking and alcohol, every toothbrush in use must be discarded, and non-irritating foods are prescribed.

A general discussion of vitamins follows with the importance of their inter-relationships; special emphasis is given to vitamins A and C. Lack of vitamin A results in degenerative changes in the gingiva; its exact action is not well understood. It is found, not in plants, but in animal products, such as butter, and mild cheese. Both vitamins A and C are necessary for normal cell function, and there is a definite connection between hypovitaminosis and inflammation; deficiency of these vitamins results in a lowering of resistance to infection.

—*M. B.*

554—Kuthan: **Vitamine als Heilmittel.** Vitamins as curative agents. *Muench. med. Wschr.* **36.** 1939.

For the past three years, in the medical clinic in Bruenn, the author has tested vitamin therapy and has drawn his conclusions after careful checking. He maintains that vitamins, when they are valuated as medicines, must be understood as substances which fit in as quick, active, and safe in the treatment of disease. Unfortunately, no facts are available, but it can be stated that disappointment cannot be denied in many cases of vitamin therapy. Vitamin A is of most value in cases of disorders of the surface epithelium; vitamin B_1 can be used in neuritides of alcoholic and gastro-intestinal basis; from a dental viewpoint, vitamin C is the most interesting, because of its use in hemorrhagic stomatitis and gingivitis.

—*M. B.*

555—Lebourg and Kamrat: **Contributions à l'étude de la Novamide 109 M en stomatologie.** Contribution to the study of Novamide 109 M in stomatology. *La Rev. de Stomat.* **8:604.**

Bucco-dental infections are cured primarily by local therapy, but medications of a general nature appear increasingly valuable as adjutants. Vaccine therapy and chemo-

therapy have proven valuable. Therapeutic derivatives of sulfamide have obtained the attention of stomatologists for two reasons: first, because they appear to be specific against streptococci, and second, because they can be given by oral route which is convenient. The authors experimented with Novamide 109 M because it seemed to be the least toxic of the sulphamide derivatives. The intravenous route is certainly preferable in serious cases, but the authors emphasized the convenience and advantages of oral administration.

In practice, the authors found 109 M to cause no change in blood composition, or serious intoxication, contrary to other sulphamide derivatives. 109 M seems to have a particular activity in bucco-dental and rhino-pharyngeal infections. The local use of Novamide, in antiseptic titer, either for massage or as a mouth wash, actually gave the authors the best results.

—*M. B.*

556—Lehmann, K.: **Zur Frage der Stomatitis-bzw. Gingivitisbehandlung.** Treatment of stomatitis or gingivitis. *D. Z. W.* **11**:252. 1939.

The author describes his method of treatment of inflammatory conditions of the mouth: bleeding gum, gingivitis, stomatitis, marginal abscesses, and paradentitis—treatment is the same in all. After preliminary treatment, he massages lightly into the gums the preparation "Gingivo-Salantale," and then makes a gingival pack of the same, leaving it on about 20 minutes. For paradentitis, Dr. Lehmann uses a vaccine preparation, the principle of which is the incorporation of metabolic products of various bacteria in oil or jelly base, which has no irritating or unfavorable effect. This vaccine is sprayed locally into the infected pockets, using a cannula. The patient is given the "Gingivo-Salantale" preparation to massage into the gum morning and night. Lehmann has treated paradentitis only with this method and has obtained remarkable results.

—*M. B.*

557—Lehne, R.: **Ueber Ozonbehandlung.** Ozone therapy. *D. Z. W.* **24**:549. 1939.

The therapeutic effect of ozone is due to the liberation of 117,000 calories in the transformation of a molecule of O_3 to O_2 and O. The spectrum of emission and absorption proves that this light is equivalent to a very active ultra-violet ray radiation. This explains the activation of cellular reproduction. The blood supply becomes more abundant and calcium retention is increased. To this activating effect is added the bactericidal action of ozone, which varies greatly with different types of bacteria. Pneumococcus, b. pyocyaneus, and diphtheria bacillus are rapidly destroyed; on the other hand, certain species of strep. viridans show unusual resistance, although other species of the same organism are sensitive. These experimental results find confirmation in the clinic, where certain gangrenous pulps do not improve at all under ozone treatment. The author recommends a concentration of 6% to destroy bacteria, and of 3-4% to activate the processes of repair and regeneration. In cases of focal infection, he prefers surgical treatment to ozone therapy.

—*M. B.*

558—Leonard, Harold J.: **The conservative treatment of periodontoclasia.** *J. A. D. A.*. **26**:1308-1317. Aug., 1939.

The conservative treatment of periodontoclasia is based on the fact that when causes of the disease about the periodontium are removed and the tissues brought back to health by massage, the covering and supporting tissues of the teeth can be maintained in health indefinitely with little if any gingival recession. Under favorable conditions, reattachment of the epithelium lining the pocket to the root surface obliterates the pocket entirely. Follow up care is more essential to maintain an extensive gingival covering tissue in health, with the pericementum far from the margin, than when the pericemental fibers start immediately beneath the marginal gingiva. In an effort to rid tissues deep beneath the surface of infection, it may tax the ingenuity to devise massage technics which will reach the depths of the flabby tissues. Any excess to-and-fro movement of the tooth will aggravate infection of the periodontal tissues and tend to delay healing. The diagnosis and treatment of conditions which cause shifting of the teeth or a to-and-fro movement are essential to satisfactory treatment.

Author's Summary

559—Leopold, E.: **Über die örtliche Anwendung des Vitamin C in der täglichen Praxis (Cebion-Paste).** Local administration of Vitamin C in daily treatment (in form of Cebion paste). *Z. Rund.* **1.** Jan. 1, 1939.

In each case, a thorough diagnosis and preparatory work are to be completed before this means of treatment is begun; calculus and other coatings are especially to be removed before the paste can be used; and finally, the patient must be advised as to his general health regime, with elimination of alcohol and nicotine.

Dr. Leopold has found, in previous investigation with other preparations, that better results are obtained when the vitamin C tablet melts slowly in the mouth, or when it is massaged into the gingiva. With Cebion paste this work is substantially lightened; also, its pleasant taste makes it easier on the patient. The patient is shown the technique once in consultation, and then allowed to carry out the procedure at home. The prescription is as follows:

1. Before retiring at night, thorough tooth brushing, and massage with Cebion paste for at least 3-4 minutes.
2. Repetition of this treatment at least once to twice during the day.

Dr. Leopold has treated 25 cases (besides those whose diagnosis and results he gives briefly in this work); each had light case of gingivitis with the typical hypovitaminosis symptoms, and an indisputable cure was obtained in each.

—*M. B.*

560—Link, G.: **Über Erfolge mit der Kaffeekohlenbehandlung.** Results of coffee-charcoal treatment. *Z. Rund.* **18.** 1939. (Originally in *Landarzt.* **13.** 1939.)

In anginous inflammation of the throat, or in true angina, scarlet angina, or in diphtheria, the coatings or clots disappear after 2-3 applications of coffee-charcoal; even in nasal diphtheria, coffee-charcoal is applicable. In the treatment of paradentosis, Link recommends rubbing with lemon slices that have been dipped into coffee-charcoal. You can also dip a finger in lemon juice, then in coffee-charcoal, and massage the gingival tissue with it.

Internally, coffee-charcoal can be used in acute gastric and intestinal disorder (a teaspoonful three times a day), in gall bladder and liver disorders, as well as in food allergies and even migraine.

—*M. B.*

561—Longnon, and Lapeyre, C.: **Resultats cliniques obtenus avec le Provac's dans les affections bucco-dentaires aigues et chroniques.** Clinical results obtained with "the Provac's" in bucco-dental diseases, both acute and chronic. *La Rev. Odontolog.* **6.** 1939.

Since 1930, the authors have treated about 350 patients with "the Provac's"; they have obtained, in the treatment of infectious lesions of bucco-dental origin most often associated with anaerobic flora, very satisfactory results. The technic differed slightly in the acute and chronic cases, but in general consisted of a series of injections over a certain period of time, which varied somewhat according to the patient's reaction. All cases since 1930 treated for chronic suppuration at the cervices were cured; and it is remarkable that teeth which were very loose, became firmer and better fixed in their sockets. These authors call attention to the fact that their method is designed only to stop suppuration and permit tissues to recover their tonus and normal condition; therefore, to obtain dynamic equilibrium of the teeth, they recommend the use of some sort of splint. It is understood that this general treatment should be accompanied by local treatment.

Six cases are cited (consisting of both chronic and acute forms) which they treated. They urge all their colleagues who have used this vaccine treatment to record their experiences in periodicals, and so help other colleagues and their patients.

—*M. B.*

562—Lufkin, Arthur W.: **Control of inflammatory conditions of the oral mucosa during orthodontic treatment.** *A. J. Orthodont. & Oral Surg.* **25**(2):130-134. Feb. 1939.

Orthodontic appliances increase the already large percentage of gingivitis in child patients. General practitioner must work in harmony with orthodontist in maintaining maximum oral health and insuring the eventual integrity of the periodontium. Earliest lesions should be detected and treated since permanent damage may result from both acute and chronic inflammations. Decalcifi-

cation and osteoporosis of alveolar crest may follow gingival irritation. General physical background of child is an important potential factor in gingival irritation, as well as local causes and especially in children with endocrine imbalance, such as diabetes, these irritations stubbornly resist treatment. A brief account is given of methods and drugs used in treatment.

—*C. R.*

563—Madarasz, E. von: **Orthodontie und Paradentose.** Orthodontia and paradentosis. *Zbl. Zahn, Mund, und Kieferhk.* **1.** 1939.

Shifted pyorrhetic teeth can be treated orthodontically, with good results, up to about 40 years of age, especially with a denture apparatus. English Class II of paradentosis is caused by overstrain. Denture regulating apparatuses have biting surfaces for antagonists in the spaces where teeth are missing. Various teeth can also be brought back into their former positions, as for example in paradentosis diastema. Dentures with an outer arch are to be recommended not only as regulating, but also as prophylactic measures. The importance of procedures to remove occlusal strain are explicitly stressed in this article. Also, a number of anomalies of occlusion can produce paradentosis, especially overbite, compression, etc.; therefore, early orthodontic treatment, or prophylaxis, can help prevent paradentosis.

—*M. B.*

564—Madison, William J.: **A Review of some surgical methods of treating pyorrhea.** *A. J. Orthodont. & Oral Surg.* **25**(9):898-901. Sept., 1939.

A critical analysis of the various methods of surgical interference in the treatment of pyorrhea, reveals that they are all modifications of two methods as classified by Miller: (1) removal of affected tissue (gingivectomy); (2) exposing the affected area for access and returning the overlying tissue to place, after the operation (flap operation). A chronological summary of the various methods, originators, and dates according to the above classification is: (1) gingivectomy; 1912 Pickerill, 1915 Black, 1920 Nodine, 1920 Ziesel, 1928 Ward, 1929 Kaiser, 1932 Crane and Kaplan. (2) flap operation; 1914 Cieszynski, 1917 Widman, 1918 Zentler, 1920 Neumann, 1924 Shearer, 1926 Zemsky, 1931 Kirkland.

A concise history of the surgical treatment of periodontoclasia and an excellent summary of the methods of prominent specialists.

—*C. R.*

565—Magnin, G.: **Étude de l'évolution des paradentopathies (gingivites et paradentoses).** Study of the evolution of paradental pathologies (gingivitis and paradentoses) in a school of recruits of ninety days. *Schw. Monat. für Zahn.* **8**:808. 1939.

The author first presents an extensive general discussion of the subject, including definition of terms, factors involved, and clinical morphology.

Dr. Magnin then discusses his clinical experience in a school for recruits. He made two examinations, one at the beginning of the period of training, and one two and a half months later. He found that on his second visit, a considerable percentage of the cases of paradentitis, gingivitis, and paradentosis that he had first observed, had either become stabilized or actually improved. He attributes this to several factors. First, the regulation oral hygiene imposed, consisting of brushing the teeth three times a day and the use of mouthwashes; this not only decreased bacterial growth in the mouth, but stimulated the paradental tissues and improved the circulation in the gingiva. Second, the regime of work, consisting of healthful physical exercise in the open air, definitely a stimulant to general health and well-balanced body function. Third, the type of rough, healthful food served in the army makes for a better diet, and also greater use of the masticatory apparatus. These three factors—hygiene, exercise and alimentation—contribute to improve the constitution of the individual, stimulating function and thus contributing to improve general health; and since the paradental tissues reflect the state of general health, they are also improved.

—*M. B.*

566—Molnar, Laszlo: **Treatment of gingivitis gravidarum.** *Abstr. J. A. D. A.* **26**:1403. Aug. 1939.

In about 50 per cent of the pregnant women studied, gingivitis accompanied by bleeding from the gum and nose and, in most cases, loosening of the teeth were observed. Gingivitis gravidarum begins most frequently between the fourth and the fifth month of pregnancy and disappears about the second month after delivery.

The author reviews the different apparent factors in the etiology of this condition, particularly nutritional deficiencies and

changes in the circulatory system and in the function of the internal glands. In cases of marked hypertrophy of the gingival papillae, excision of the hypertrophied tissue with the electric knife was found advisable. Therapy in the less severe form of gingivitis gravidarum is largely nutritional. Milk products and foods rich in vitamin C and phosphates are recommended. The author found that the use of synthetic vitamin concentrates was not advisable. Ultraviolet radiation gave favorable results in some cases.

It is understood that the most important phase in the treatment of gingivitis gravidarum is the maintenance of a well-balanced diet of natural food products sufficient to meet the increased nutritional requirements of pregnancy.—*Ztschr. f. Stomatol.*, 37: 468, 1939.

R. F. SOGNNAES.

—*Copy*

567—Morrison, W. A.: **Pyorrhea gingivae and its treatment.** *D. Mag. & Oral Topics.* **56**:324 Apr. 1939.

This article deals with a method of treating pyorrhea advocated by Dr. J. Monahon Lewis, Lecturer in Periodontia, University of Melbourne. Gingivectomy is the treatment of choice. Operative technic, designed to preserve certain tissues, is dealt with in detail.

Instrumentation of the interdental space should be limited to making the attachment symmetrical, and if possible, insuring that the slope of the interdental tissue is deeper externally than on the lingual side. This precaution is necessary to assist the patient in the after care of the mouth.

Post operative treatment consists of packing the operated area with a paste consisting of zinc oxide and Eugenol in which cottonwool has been incorporated. After removing the pack the patient should follow the "wooden point" massage with the toothpick as advocated by E. W. Fish.

568—Neuwiler: **Bermerkungen zur Frage des Vitamin-C-Bedarfes.** Observations on the question of the vitamin C requirement. *Klin. Wschr.* **22**. 1939.

The average vitamin C requirement is, in agreement with the assertion of almost all investigators, about 50 mg. daily, resulting from the compromise between the ascorbic acid content of food and its value in the blood; 30 mg. daily have been found to be a minimum. During sickness, convalescence, etc., suitable increase is needed; this increased intake should be so high that the blood value does not fall below 8 mg./liter. With ascorbic acid intake of only 10-12 mg. daily, the blood value falls to a level seen only in disease or in malnutrition. The importance of increased vitamin C intake for the productive power and resistance of the organism can be shown in experiments on guinea pigs.

—*M. B.*

569—Orban, Balint: **Gingivectomy or flap operation.** *J. A. D. A.*, **26**(8):1276-1283. Aug., 1939.

Gingivectomy should not be given preference because in treating gum diseases there is no reason to be radical. The granulation tissue below the bottom of the gingival crevice should not be removed surgically as this tissue has developed as a reaction to irritation and will disappear after removal of the local cause. Alveolar bone is not infected in pyorrhea and should not be trimmed and leveled in treatment. In most cases, scaling and polishing the teeth and curetting the gum will be satisfactory. If the crevice is so deep that a good result can not be expected from the above treatment, then gingivectomy should be performed. However, the gum should be removed only to the bottom of the crevice. Post operative treatment with packs and astringent drugs is then necessary.

Author's Abstract

570—Ossenberg, C.: **Zur Therapie der Zahnfleisch-und Zahnbetterkrangungen.** Therapy of diseases of the gum and supporting structures of the teeth. *Z. Rund.* **13**:545. 1939

Dr. Ossenberg describes a method he has developed for treating diseases of the gingiva and peridental tissues. The preparatory treatment consists in removal of all irritating conditions, such as calculus, overhanging crowns and fillings, caries under the gingival margin, etc. He uses as medication for the oral epithelium, the preparation "Para-Muc"; it is effective and non-irritating. First, the teeth are washed with benzene,

and dried with warm air; then, the pockets and interproximal spaces are cleaned out with "Para-Muc," using a brush of marten-hair; finally, the whole gingival tissue is dried with a mild current of air. The "Para-Muc" adheres in position several hours, and is not washed out by the saliva. This treatment is made twice weekly at the beginning; later, when the granulation tissue has disappeared, it is done once a week. The pockets disappear when the inflammatory condition is removed, since they are the result, not the cause, of it. In all cases, good results were obtained with this method; the patients returned every four months for a check-up.

As additional treatment, the patients were prescribed "Ad-Muc" to use as a paste for massage, to stimulate the circulation in the paradentium. In cases where the gingival pockets were over 4 mm., and especially in vertical atrophy, surgery was used; the above method will not give results. The author had used this therapy for bleeding gum, gingival catarrh, ulcerous and aphthous gingivitis and stomatitis, with good results; he recommends it as an excellent help in the treatment of gingival and peridental diseases in daily practice.

—*M. B.*

571—Pecorone: **Contribution à l'étude des gingivitis chroniques hypertrophiques banales.** Contribution to the study of chronic, common hypertrophic gingivitis. *Rev. de Stom.* **5**:423. 1939. (Originally in *Rev. del circulo odont. de Rosario.* **10**:3. 1938.)

After a review of the anatomy and histology of the normal gingival mucosa, the author studies simple hypertrophic gingivitis, or diffuse hypertrophy of the gingiva, a congenital or endocrine disorder. Then, he examines marginal hypertrophic gingivitis, of a chronic type; this is of an inflammatory nature with conjunctive proliferation and infiltration of lympho-plasmocytes and giant cells. The irritation from cervical caries, calculus, extending fillings, or malposition, is the primary cause of marginal gingivitis. Buccal respiration due to nasal obstruction, gastro-intestinal disorders, diabetes, nephritis, vit. C deficiency are conditions which lower resistance to gingival infection.

Therapy must be surgical, with removal of hypertrophied tissue; but, at the same time, one must treat the cause of the irritation of the interproximal papillae. A diet rich in vit. C will prevent relapses. From a prognostic viewpoint, even if hypertrophies are of a benign character, they can still evolve after a time into fibrous, or even, occasionally, sarcomatous epuli.

—*M. B.*

572—Potter, William E.: **Correction of abnormal tooth anatomy: Its effect on pathologic conditions of the soft tissues.** *D. Digest,* **45**(8):302-305. Aug. 1939.

The destructive effect of traumatic occlusion, open contacts, poorly-fitted crowns and bridges, calculus, and of the lack of mouth hygiene on the health of the soft tissues and bone surrounding the teeth is generally recognized by the dental profession. The influence that abnormal tooth anatomy has on the teeth and adjacent structures, however, has not been given enough attention.

I am not advocating the correction of tooth anatomy as a cure-all, but certainly its importance must be considerd in the treatment of pathologic conditions of the soft tissues. Moreover, I am not suggesting orthodontic treatment by means of carborundum stones; however, a small reduction in tooth surface will often change the act of mastication from a disease-producing process to a normal physiologic function.

Many cases of marginal and deep seated gingivitis will respond better if correction of tooth anatomy is added to other methods of treatment. If abnormal tooth anatomy is the main cause of the symptoms, its correction will permanently relieve the condition. If, however, the symptoms are caused by calculus or, if a diet deficiency is the underlying cause, then that must be corrected; likewise, faulty occlusion must be corrected. In other words, the results of treatment depend on an accurate diagnosis and correction of those conditions that are causing the disturbance to the tissues.

—*Extract.*

573—Query: **Vitamins and pyorrhea,** *J. A. M. A.* **113**(1):83. July 1, 1939.

Is vitamin C or any other vitamin valuable in checking or curing pyorrhea? Different cases have widely different pathologies. There is one type undoubtedly related to scurvy, and here vitamin C is of course necessary. The relation of other vitamins, especially A, is not so clear, but some relationship has been reported and also an association with endocrine imbalance. Boyle, Bessey and Wolbach are quoted on the question of the scorbutic nature of human periodontal disease and reference is made to the experiments being conducted with various vitamins, calcium and phosphorus in connection with health of teeth and gums. "The usefulness of any of these or of vita-

min C in the treatment of pyorrhea is not, however, clearly established."

—*C. R.*

574—Rhoads, C. P., and others: Vitamin B_2 therapy, *J. A. M. A.*, 113(4):297-302. July 2, 1939.

This fine report on vitamin B_2 consists of questions and discussion participated in by the staff of Cornell Medical School and New York Hospital, students and visitors. Asked if B_2 was useful in other conditions besides pellagra, sprue, and anemia, Dr. Rhoads replied, in part, "We see constantly in our hospital on the infectious service a disorder marked by stomatitis and often by mild neurologic disturbance. . . . In treating this disorder the B_2 complex is exceedingly useful." Further, "We are also interested in a large group of individuals with various disorders of the oral mucous membrane, most of them without much anemia. Much can be done with B_2 complex to maintain the integrity of those mucous membranes." Various types of glossitis (some 100 cases) were studied and many did not respond to nicotinic acid but most did respond to liver extract (ribo-flavin). The cracked lips of cheilosis have been produced by withdrawal of flavin and cured by administering it (Sebrell). Milk is exceedingly rich in flavin, less rich in nicotinic acid. Dogs on milk alone have stomatitis but this may be lack of something besides nicotinic acid, iron for example. Apparently interference with any respiratory enzyme produces stomatitis in dogs. More experimentation is necessary with vitamin A, but there is a strong suggestion that lack of A lowers resistance of experimental animals to infection.

—*C. R.*

575—Ritzert, A.: Die Gingivitis und ihre Behandlung mit Targesin. Gingivitis and its treatment with Targesin. *Z. Rund.* **36**:1467. 1939.

Gingivitis is the most frequent inflammatory phenomenon in the mouth; and in fact, only in a few people can there be found gingivae entirely free from some inflammatory reactions. It is caused not alone by local irritation, but is also a reflection of a general systemic disorder. Removal of the local causes of irritation and internal therapy are thus both extremely necessary in the treatment of gingivitis.

Local medicational treatment still remains as a factor that cannot be omitted; it acts through infiltration and absorption, to bolster the defensive activity of the body. A tissue medication should therefore stimulate an increased activity of the reticulo-endothelial system to stop the spread of bacterial infection. The author has used "Targesin" for two years on patients with various gingival and oral mucosal inflammatory conditions. Targesin is chemically a complex colloidal di-acetyl-tannin-silver-albumen compound, with about 6% silver, which is slightly soluble in distilled and electrolytic water, without a precipitate. It has no irritating action.

Several specific cases are given in detail, in which Targesin was used successfully. It has been used by the author for all forms of gingivitis, from marginal gingivitis to severe ulcerous degeneration of the gingivae.

—*M. B.*

576—Salman, Irving: Pericoronal infection. *D. Outlook.* **26**(10):460-464. Oct. 1939.

A treatise on the diagnosis and treatment of pericoronal infection of the soft tissues adjacent to the lower third molars.

Three (3) predisposing causes are listed:

1. Displaced tooth bud.
2. Insufficient space for normal eruption.
3. Abnormal thickening of fibrous tissue over the crown.

Three (3) types are listed:

1. Chronic.
2. Sub Acute.
3. Acute.

SYMPTOMS	TREATMENT
Chronic. Overlying mucosa inflamed and tender.	If radiograms reveal sufficient space for normal eruption, use escharotics beneath the flap or lance the tissue; otherwise extraction is advisable.
Sub-acute. More severe, local swelling, difficult swallowing. Probability of pus and slight trismus.	Symptomatic. Extraction after acute stage has passed.
Acute. Varied degrees of swelling and pain. Partial or complete trismus. Impaired swallowing. Fever, rapid pulse, possible fluctuation and constipation.	Surgery—other than for the purpose of drainage is contradicted. Symptomatic—with the removal of the tooth when the infection subsides.

Radiograms. Of no value except as mentioned under "Chronic."

—*J. M.*

577—Scherer, W. H.: **Electrosurgery: Its possibilities in the treatment of periodontoclasia.** *J. A. D. A.*, **26**:759-65. May, 1939.

Surgical Diathermy is divided into three different types of modalities, electrocoagulation, electrodesication, and high frequency current.

Advantages of these electrosurgical methods are (1) minimum loss of tissue. (2) A resultant beneficial hyperemia. (3) Lessened sensitiveness of teeth. (4) Favorable prognosis for deep or shallow pockets. (5) Ease of control. (6) Adaptability of electrodes and sterile operations. (7) A minimum of granulation and (8) Absence of hemorrhage and swelling.

Preoperative treatment consists of thorough prophylaxis, scaling, correcting occlusal overstresses and teaching patient proper technic of tooth brushing and stimulation. Unless treatment is overdone very little reaction occurs. Possibilities of tooth devitalization and bone injury are remote, if operator has done experimental work.

It is more conservative than radical scalpel surgery. It is valuable in apparently hopeless cases. Electrosurgery is not a panacea for all periodontal diseases. There are pitfalls incident to its use. This method moderates the severity of radical surgery and augments the value of conservative treatment.

Electrosurgery has a place of prominence in medicine and should attain increasing value in dental fields.

—*Author's Abstract.*

578—Smith, Rowe: **Fads in periodontal treatment that have passed into disuse and fundamentals for successful treatment that remain.** *J. A. D. A.*, **26**(10):1318-24. Aug., 1939.

During the last quarter of a century there have been many fads in the treatment of periodontal disease, among them cataphoresis, vaccine therapy, ultraviolet ray therapy, the use of escharotic acids, the Pycope treatment, emetine chloride treatment, the Dunlop treatment, and more recently, the spectacular electrocoagulation method.

For the most part, these various methods have proved ineffective in treating periodontal disease. However, a number of them have served as stepping stones to greater light on the successful treatment of periodontal disease; and oxygen therapy, a part of the original Dunlop treatment, is still employed as an effective aid.

The general practitioner is cautioned against adopting these "sure cures" with the expectation of gaining worthwhile results; in the end he must rely upon the fundamental principles as originally laid down by Riggs, the founder of modern periodontal treatment. He must depend, not upon the application of various drugs and medicaments to effect a cure or to control the disease, but upon the elimination of all diseased periodontal tissue and pathologic pockets and their accompanying irritating and septic matter; the restoration of the dentition to normal function as nearly as possible; the correction of any nutritional deficiencies and other general health disturbances; and the institution and maintenance of oral hygiene.

The paper points out that even though there is a wide divergence of opinion among past and present day authorities throughout the world as to the exact etiology of periodontal disease, all seem to agree on one fundamental—oral hygiene forms the most effective preventive treatment of periodontal disease and is one of the absolute necessities for bringing about and maintaining its cure or control.

—*Author's Abstract.*

579—Sydenstricker, V. P.; Geeslin, L. E.; Templeton, C. M., and Weaver, J. W.: **Riboflavin deficiency in human subjects.** *J. A. M. A.*, **113**(19):1697-1700. Nov. 4, 1939.

Cheilitis was one of the first clinical signs discovered (by Sebrell and Butler) in patients with riboflavin deficiency. This condition has been called "marginal stomatitis." There is redness and desquamation of the lips and finally ulceration at the mucocutaneous junction with fissures or "rhagades" at the corners of the mouth. These lesions are frequently associated with pellagra, having been commonly considered an accessory sign of the pellagrous syndrome. Cheilitis was present in patients under the usual treatment with nicotinic acid and the condition improved only when riboflavin was administered either directly or by means of foods rich in this essential, and relapsed when it was discontinued. Large doses were found most effective.

—*C. R.*

580—Thiel, H. van: **Bissverlagerung und Entlastungsbehandlung mit festsitzendem Ersatz in einen Fall befinnender Paradentose.** Bite displacement and relief treatment with a fixed restoration in a case of incipient paradentosis. *Parad.* **11, 12**:204. 1939.

The patient presented incipient paradentosis with a poor bite position and direction; radiograms and clinical findings showed paradental changes especially around certain teeth, while some were missing altogether. Systemic diagnosis revealed no other possible cause of paradentosis than local malocclusion. From the therapeutic standpoint, therefore, it was seen that the best procedure would be the correction of the relationship between the two arches. The question arose of whether a fixed, or a partially fixed restoration should be made. The factors to be considered in making the restoration were: relief of traumatic occlusion, shifting of the bite and raising it, support of weakened teeth, and replacement of missing teeth.

A full description is given of the apparatus constructed for the patient. This case illustrates treatment where a fixed restoration is used requiring bite raising and displacement as relief therapy in incipient paradentosis.

—*M. B.*

581—Thielmann, K.: **Aufgaben und Mittel der orthopaedischen Paradentosebehandlung.** Problems and means of orthopedic paradentosis therapy. *Dtsch. Zahn, Mund, und Kieferheilk.* **12**:734. 1939.

A study of overstrain of paradentotic teeth from a statistical viewpoint has revealed important facts on the meaning of various mechanical factors, such as direction and point of application of force, and resorption of the alveolar process, in the etiology of paradentoses. It has been possible for Dr. Thielmann to catch maldevelopment early, and to rebuild it along advanced orthopedic lines. He has come to regard vertical deviations of the jaw and arches as more important than the horizontal deviations.

The author discusses the various malformations that occur in vertical dimension, and the orthopedic treatment of them. Illustrations from case histories are included.

—*M. B.*

582—Tobler, W.: **Der C-Vitamin-Bedarf des Kindes.** The vitamin C requirement of the child. *Schw. Med. Wschr.* **30**. 1939.

The author criticizes the changing information on the vitamin C requirement of children. Together with Rietschel, he is of the opinion that vitamin C, because of its catalytic nature in the body, does not have to be administered to saturation; and he has maintained, on the basis of his experiences with school children in Vienna in 1917, that about 5 mg. ascorbic acid per day is sufficient to allow manifest scurvy to heal. Naturally, the anti-scorbutic quantity of the vitamin is also dependent on the correlation with other vitamins, especially A, B, and B_2 complex. For this reason, a great deal of fruit and green vegetables are recommended for children, since in that way, not only vitamin C; but also the usual vitamins and minerals are ingested. The contention of other authors to bring the vitamin C value to the saturation point, is challenged by Tobler. He recalls the great difference and varying value in the vitamin C content in women's milk, which varies between 0.9 and 8.2 mg. %. In the opinion of Dr. Tobler, these figures indicate the region in which the regulation of child health through vitamin C administration should be kept.

—*M. B.*

583—Todokinof, Prof.: **La pyorrhée alvéolaire et al lutte contre ce foyer toxique.** Alveolar pyorrhea and the fight against this toxic condition. *L'Odontologie.* **3**. 1939. (Originally in *La Stom. Sovietique.* **1**. 1939.)

The author, after recalling several cases of illness hospitalized for chronic septicemia, and who, after treatment for pyorrhea (extraction of loose teeth, curettage of pockets according to the method of Sachs, and hygienic considerations) were cured—states that in the fight against the symptoms of pyorrhea and its treatment, when it has already developed, sanitary and prophylactic measures are very important. He considers that, for safeguarding the health of workers, in the actual organization of dental clinics, not enough attention is given to pyorrhea. Those clinics which have a great number of surgeon dentists should have a few specialize in the care of pyorrhea. In small clinics, special hours should be set aside for them.

—*M. B.*

584—Türk, M., and Vester: **Beiträge zur Klinik und Prophylaxe der Paradentose bei Wehrmachtsangehörigen.** Contributions to the treatment and prevention of paradentosis in relation to the defensive forces. *Paradentium.* **1**:1. 1939.

After extensive research, the authors have arrived at the following conclusions:

1. Before diagnosing a paradentosis type, a systematic, preliminary analysis in 3-5 sittings is advisable.
2. Smoking should be forbidden during treatment as an aid in general care.
3. In severe cases, doses of prontosil and ascorbic acid are to be administered after a vitamin deficiency has been established. A diet rich in raw foods is to be prescribed.
4. With motorized troops, protective measures against too strong inhalation of dust and violent shaking of the intestines during long maneuvers should be taken.
5. Reduction in use of nicotine.
6. Suggestion of the addition of raw food diet for lunch and dinner without any increase in food.

—*M. B.*

585—Vandrepote: **Behandlung von Mund— und Zahnerkrankungen mit Ozon.** The treatment of mouth and tooth diseases with ozone. *Zbl. Zahn, Mund, und Kieferhk.* **1**. 1939.

In previous papers, the author dealt with the application of ozone in dental as well as in general therapy. In tooth extraction, use is made of the analgesic and anesthetic properties of ozone, according to a special method, which is described in detail. In the same sense, it acts as a preventative measure against neuralgia and after-effects of extraction. The same properties serve further in painless treatment of various degrees of caries, cure of gingivitis and sore mucosa, and finally for the regeneration of the gingiva in the treatment of paradentosis, whereby loose teeth can again become fast in their sockets.

The method of therapy in all the above cases is given in detail with the statement that ozone therapy, which he applies with a dentozone apparatus, will revolutionize therapeutic procedures.

—*M. B.*

586—Walsh, Joseph R.: **A periodontal view of occlusion.** *D. Items of Interest,* **61**:1069-75. Nov., 1939.

Occlusion is the basis of all dentistry. The periodontist should be just as interested in the question of occlusion as the orthodontist.

In most instances the periodontist must resort to the use of carbon paper and the carborundum stone. Admittedly, grinding has been overdone in many instances, but if one keeps in mind that he is to judiciously change the inclination of the inclined planes where indicated, so as to give freedom of functional movement in the various jaw excursions, no harm will result.

The author believes with Hellman that "the normal occlusion conceived to present 100% perfection is a myth." It would be well for every one to accept the periodontist's view, that the normal occlusion means that the physiological and biological forces are in such balance that stability, function, and health will be maintained.

Occlusion like life itself is a continual balancing of forces, an adjustment of internal conditions to external conditions. If we agree that occlusion is our basis, then our concept of occlusion in every branch of dentistry should be based upon biological principles such as function, nutrition, metabolism, and tissue repair.

Author's Abstract

587—Winckelmann: **Zur Vitamin-C-Versorgung des menschlichen Organismus.** Vitamin C considerations in the human organism. *Z. Rund.* **9**. 1939. (Originally in *Hippokrates.* **4**. 1939.)

Vitamin therapy is today still uppermost in medical thought. Deficiency diseases are treated with the corresponding vitamin preparation. However, consideration of individuals not yet afflicted with any diseases is more important than treating those who already are sick. Vitamins B and C are not present in sufficient amounts in our food today. Even in seemingly healthy people, a vitamin deficiency can exist which is not yet definite. In one study, it was shown that about 65% of all people who suffer from chronic infectious diseases are lacking in vitamin C. Vitamin C deficiency in these cases is not always apparent, but can gradually lead to definite symptoms.

As a source of vitamin C, the cheapest is

the potato; next to this, there is the wild hedge-rose, which is used in the form of jam and tea. Indeed, the hedge-rose is well calculated to remove any vitamin C deficiency.

—*M. B.*

588—Wolfsohn, M. D.: **Periodontal disease and electro-coagulation.** *J. A. D. A.*, **26**(8):1294-1297. Aug., 1939.

The author's conclusion:

It is advisable to endeavor to determine the etiology in all cases of periodontoclasia. Diagnosis should be made and the prognosis of the case be determined. The occlusion should be carefully studied and corrected if found faulty. Treatment of the teeth should then begin. The electro-coagulation unit is a great aid in the treatment of the periodontal pocket. Diathermic energy should be used to desiccate the epithelium and inflammatory tissues in the pocket and not to destroy the marginal or cemental gingiva.

—*Copy*

589—Ziskin, Daniel E.: **Hormonal therapy for some gingival conditions.** *J. D. Res.* **18**(4):329-41. Aug., 1939.

Hormonal therapy for oral conditions may be said to rest on the fact that certain gingival irregularities occur during periods commonly associated with hormonal change; during adolescence, in middle age, and during the menstrual cycle. Maturation and keratinization of vaginal mucous membranes are known to be promoted by estrogenic hormone therapy, and beneficial effects have also been observed in treatment of atrophic rhinitis and ozena by its tropical application. Both estrogenic and male sex hormones were found to exert a beneficial therapeutic effect on the oral mucous membrane in certain cases treated by Ziskin locally and by injection. While it must be remembered that hormone therapy is still in the experimental stage, it is the belief of the author that where local therapy has failed hormone therapy may prove a valuable accessory in treatment. It cannot however replace local methods and should under no circumstances be used without the co-operation of a physician both before and during treatment.

—*C. R.*

* * *

(h) Vincent's Infection

(Continued from 11(1):52, Jan. 1940)

230—Kirkpatrick, R. M.: **Diet: A predisposing factor in the etiology of Vincent's infection and periodontitis.** *J.A.D.A.* **26**:1229. July, 1939.

In a study of diets of the natives of Australia and New Guinea, the author noted that deficiencies of vitamins A and B_2 were partially responsible for the predisposition of the natives to Vincent's infection and suppurative periodontitis.—*D. J. Australia*, 11. January, 1939.

—*B. J. Frey*

231—Rosebury, Theodor, and Genevieve Foley: **Experimental Vincent's infection.** *J. A. D. A.* **26**(11):1798-1811, Nov., 1939.

Authors' summary: "Previous observers have reported the experimental production of transmissible putrid gangrenous lesions, with material containing the flora of Vincent's infection, in a variety of animal species and man. Their findings, particularly those in which mixtures of pure cultures were used successfully, demonstrate the pathogenicity of a complex of microörganisms including spirochetes, fusiform bacilli, and other organisms. In this report, these findings are reviewed, and data are presented on original studies with guinea-pigs which confirm and extend some of them. Lesions produced in the groins of guinea-pigs by subcutaneous inoculation with human mouth material have been transmitted for more than twenty passages. Two types of disease result from such inoculation, apparently differing chiefly in severity, and evidently corresponding with extremes of fusospirochetal infection in man. These are local putrid abscesses, tending to heal by evacuation and the formation of ulcers; and fatal diffuse gangrene of the subcutaneous tissues. The milder lesion is capable, on passage, of reproducing the more severe. In both, the exudate shows a characteristic microscopic picture of fusospirochetal infection, containing small regularly wound spirochetes as the predominant form, accompanied by small fusiform bacilli, vibrios, cocci and other bacteria. The large loosely wound spirals and the large granular

fusiform bacilli commonly seen in human lesions tend to disappear from the animal exudate, along with aerobic contaminants, gas-formers and filaments. Data are given which indicate that no general immunity is conferred by recovery from these lesions, although a slight local immunity to reinfection seems to develop. The results of inoculation of the exudate by various routes other than subcutaneously into the groin are described. Preliminary data are given on the effects of neo-arsphenamine on these lesions."

—*Copy.*

232—Rosebury, Theodor, Genevieve Foley, and Fred L. Rights: **Effects of neoarsphenamine and sulpharsphenamine on experimental fuso-spirochetal infection in guinea pigs,** *J. of Infectious Disease,* **65**:291-300. Nov., Dec., 1939.

Authors' summary: "Neoarsphenamine and sulpharsphenamine, in dosages ranging from 6 to 18 mg. per kg. of body weight, were used in therapy of lesions in guinea pigs produced by subcutaneous inoculation of exudate derived originally from fuso-spirochetal disease in man and passed successively through guinea pigs. Both drugs, when introduced directly into the lesions, had a distinct ameliorative effect on the course of the infection, induced a diminution of the mixed fuso-spirochetal flora, and reduced or abolished the infectivity of the exudate for fresh guinea pigs. Neoarsphenamine seemed to be more effective than sulpharsphenamine; the action of the former appeared to be directed against the whole fuso-spirochetal flora, whereas the latter had a more selective effect exerted chiefly or only on the spirochetes. By systemic routes, on the other hand (neoarsphenamine intravenously or sulpharsphenamine intramuscularly) neither drug had any appreciable beneficial effect. The results accord with clinical and other data in indicating that topical application of these drugs is a rational form of therapy in accessible fuso-spirochetal infections of man, but do not support the practice of intravenous or intramuscular administration of arsenicals in treatment of these diseases.

233—Ruppe: **Les stomatites ulcère-membraneuses.** Ulcero-membranous stomatitis. *La Rev. Odont.* **6**:1939.

From a bacteriological viewpoint, it is always a fuso-spirillar association which is the cause of ulcero-membranous stomatitis; but according to most authors, this symbiosis cannot act on healthy tissue, and only becomes pathogenic on tissues whose nutrition is abnormal. Grandclaude, and Lesbre, claim this disease is due to fuso-streptococcic association with its hemorrhagic and necrotic properties. After having reviewed the symptomatology and differential diagnosis, Ruppe discusses the question of etiologic diagnosis:

1. It can develop in the course of treatment with mercury or bismuth.
2. It can occur in the course of eruption of the lower third molar or of any other bucco-dental affection.
3. Poor general state of health can have a repercussion on the buccal mucosa.
4. According to some authors, when it takes on an epidemic aspect, it becomes stomatitis of Bergeron; according to others, only abnormal physiology is the cause, and these are pseudo-epidemics such as were described during the war.

Before all anti-syphilitic treatment, the general mouth condition should be put in good order. In treatment: chromic acid 50%, warm mouthwashes, painting with novarsenobenzol or methylene blue. To combat bad odor, Dakin's solution as a mouthwash is advised. Vitamin C is important.

—*M. B.*

234—Sinclair, J. A.: **Vitamin A and B deficiency—An etiologic factor in acute, subacute and chronic Vincent's infection and other dental conditions.** *J. A. D. A.* **26**(10):1611-17. Oct., 1939.

Sinclair reviews the literature on the subject of vitamin A and vitamin B complex. On the basis of these studies he has experimented extensively with vitamin therapy in treatment of oral conditions and his observations

seem to confirm the opinion that the number of subclinical avitaminoses may be very large. It would seem that clinical and subclinical cases may have a direct relationship to pyorrhea and acute, subacute, chronic, and recurring Vincent's infection. . . . . extreme polyavitaminosis with or without local precipitating factors may produce the condition described by Gottlieb as "diffuse atrophy of the alveolar bone," by Box as "complex periodontitis" and by Becks as "genuine paradentitis." Lack of vitamins B or A may be involved in the extreme sensitiveness

of the roots of the teeth to instrumentation and thermal response, as these conditions often cease with vitamin therapy.

Sinclair's experience confirms the findings that large doses of the deficient vitamins are necessary to reëstablish normal vitamin content of the body.

—*C. R.*

(i) Miscellaneous

(Continued from 11(1):55. Jan. 1940)

211—Brewer, John H.: **The antibacterial effects of the organic mercurial compounds with special reference to their use as germicides for the sterilization of surgical and dental instruments.** *J. A. M. A.* **112**(20):2009-18. May 20, 1939.

Experiments were conducted with several organic mercurials used to sterilize dental and other instruments. The inefficiency of mercury bichlorid as a definite germicide was shown fifty years ago. With certain types of laboratory tests the newer organic mercurials appear to be more reliable but Brewer finds some of the claims made for them without scientific foundation. These claims were usually based on phenol coefficient tests using only a few types of organisms, no adequate tests being made with spore-forming organisms. To test the effectiveness of dental bur sterilization 60 complete experiments were carried out representing every possible combination suggested or used by the dentist. The author concludes from these meticulously conducted experiments that not one of the mercurials examined can be relied on when spore-forming organisms are present. Moreover the claim of certain manufacturers that their product will kill vegetative bacteria in ten minutes is unreliable; in some instances thirty minutes did not suffice to kill staphylococcus aureus. Some method other than the one based on the phenol co-efficient ought to be used to establish efficiency of mercurials to disinfect instruments. It is hopefully suggested that one of the newer organic solvents, wetting agents or surface tension reductants might affect spores in such a way as to make them more easily killed by the mercurials.

—*C. R.*

212—Correspondence: **Misuse of boric acid and iodine.** *J. A. M. A.*, **112**(12): 1178. Mar., 1939.

Berlin correspondent writes that the national minister of the interior warns the public against the indiscriminate use of iodized foods and medicaments because of sensitivity of many people to even small amounts of the drug with resultant disturbance of the thyroid function, etc. The minister failed to mention iodized toothpastes "so abundantly and altogether irrationally advertised to the German public," and such dentifrices are a menace, correspondent thinks, because there is no way of determining the amount of iodine absorbed from them.

—*C. R.*

213—Eldridge, Zachary: **Submaxillary calculus.** *J. A. D. A.*, **26**:1681-1682. Oct., 1939.

The patient, a young man of 23 years, complained of swelling of the right jaw, and enlargement of the floor of the mouth. There was a peculiar taste and pus oozed from under his tongue.

Examination revealed a large mass in the floor of the mouth. When the submaxillary gland was "milked" the discharge became profuse at Wharton's duct, and the enlargement at the floor reduced. Radiographs showed a rounded calculus at the orifice of the submaxillary duct the size of a large grapefruit seed.

An incision was made over the duct and the calculus exposed. The entire calculus, measuring about 5 cm. long and 10 mm. in diameter, tapering to the orifice of the duct, was removed en masse. It was interesting to note that the calculus was made up of small irregular masses, only one of which was dense enough to be radiopaque.

—*Author's Abstract*

214—Figg, W. A.: **Signs of traumatic changes around an impacted canine.** Abstr. *J. D. Res.* **18**:267. June, 1939.

A case of an impacted canine is demonstrated. The tip of the crown of this tooth was lying in contact with the apex of the second incisor. The apex of the impacted canine was in contact with the apex of the second premolar. Due to this close relationship between the erupted teeth and impacted tooth traumatic injuries could be observed at the places where these teeth came into contact. A traumatic injury could also be observed in the peridental membrane of

the impacted canine, most probably due to pressure exerted alternately on the crown and apex by the second incisor and premolar with changes in stress during mastication.

—*Copy*

215—Kauffmann, Joseph H.: **A study of the toothbrush:** *J. A. D. A.* **26**(1): 32-35. Jan., 1939.

Toothbrush bristles are the long hair from the back and preferably the neck of the hog. Bristles may be black, particolored or white and the best quality comes from hogs raised in the cold climates of Northern China, Siberia and Russia. The Chinese who now lead in the bristle industry put the bristle from the slaughtered hog through a factory processing of at least ten to fifteen days. After sorting according to stiffness and quality, the bristles are bundled and disinfected with formalin solution or steam. Large quantities are shipped to the United States, England and Japan. Five-sixths of all bristle imports to our country come from China. The world's demand for good bristle is increasing and production has decreased in all countries except China. Acceptable substitutes for hog bristles are being sought. (Other articles on same subject by Kauffmann are to be found in D. Cosmos: 66:300. Mar. 1921; 71:132. Feb. 1929; 74:601. Jan. 1932.)

—*Author's Abstract*

216—Kirkland, Olin: **The practical and economic value of periodontal practice.** *J. A. D. A.*, **26**(5):778-783. May, 1939.

This paper is primarily an appeal to the general practitioner to recognize periodontal pathology in its incipiency. Many members of the profession treat periodontal disease successfully but the conservation of the investing tissues has not interested the profession as a whole as have restorative practices. Limited undergraduate education in periodontology and its lower economic value in the average practice are responsible for this. Institutions teach what students demand and there is little demand for knowledge which does not promise large additions to the income. The average dentist is thus unprepared to recognize the disease until it is far advanced. Extraction is not the only means of successfully treating periodontal disease, and

the average person will willingly pay much more to save his teeth than he will pay for extractions and replacements . . . Dental service which does not include intelligent care of gingival tissues is far below the standard service that might be expected from a well-educated progressive member of the profession.

—*C. R.*

217—Madison, W. J.: **Teaching of periodontia as a technic course for the undergraduate.** *J. D. Educ.* **3**:292-297. Apr., 1939.

A technic course for undergraduate instruction in Periodontia is outlined and described. The materials and instruments used are enumerated. The course is divided into six phases: 1. Toothbrushing; 2. Scaling; 3. Subgingival curettage; 4. Surgical elimination of periodontal pockets; 5. Splints and stabilizers; 6. Equilibration of occlusion.

—*H. L.*

218—Merritt, Arthur H.: **The historical background of periodontology: Biographical sketches.** *J. Periodont.* **10**: 7-25. Jan. 1939.

After a brief introduction, the article begins with a biographical sketch of Fauchard and continues in chronological order with those of others who, like Fauchard, have made more or less definite contributions to the art and science of periodontology. Six of these are Europeans and nineteen Americans. Beginning with Riggs, each of the American contributors, are considered and note made of the part which they played in the evolution of periodontology. Only those not living are included in the review. Twelve illustrations including a photostatic copy of a hitherto unpublished letter by Riggs, accompany the article. It concludes with a brief history of the formation of the American Academy of Periodontology, an outline of the future needs of periodontia and an extensive bibliography.

—*Author's Abstract*

219—Query: **Radium poisoning from watch dial painting,** *J. A. M. A.*, **112**(18): 1855. May 6, 1939.

Woman who had worked at radium watch dial painting up to 12 years ago has necrosis of mandible and maxilla and the question is whether this could come from her former occupation. Answer: It is possible by present scientific means to determine accurately the presence of radioactive substances in the body even longer than 12 years after ex-

posure. There is probably an effect and causal relationship in the present case.

—*C. R.*

220—Stillman, Paul R.: **The past and future of periodontia.** *J. Periodont.*, **10**(1):31-36. Jan., 1939.

Dr. Stillman raises the interesting and important question of the exact status of dentistry in the philosophical hierarchy. Is dentistry really "a branch of the healing art coequal with a specialty of medicine," or is it merely a branch of technology, having no biological or physiological basis? The touchstone on which Dr. Stillman proposes to test his profession is the concept of "life present in material" and all its attendant implications; of these, the chief is *vis medicatrix naturae*, loosely, the healing power of nature, herself. It is this unique quality of *life* in the materials of the healing art, the fact that it must deal with organisms, not cadavers or other inorganic matter, which distinguishes it from all other arts. And it is the comparative ignorance or disregard of this elementary consideration on the part of the dental profession heretofore which induces Dr. Stillman to deny dentistry a position as yet "coequal with a specialty of medicine." But Dr. Stillman looks to the steady advance of periodontology, its admirable shift of focus through the years from an early interest in instrument design to an increasing scientific understanding of the living tissues under treatment, for an improvement of this state of affairs. Both philosophically and practically it seems important that dentists should determine their position, whether as artisans or as scientifically informed agents of health; Dr. Stillman's article is recommended as an excellent point of departure.

—*C. R.*

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The American Board of Periodontology, Inc.*

Organized by

THE AMERICAN ACADEMY OF PERIODONTOLOGY IN 1939.
INCORPORATED IN THE STATE OF ILLINOIS, MAY 23, 1940

Definition

Periodontology is the science and art dealing with the health and disorders of the investing and supporting structures of the teeth, and their treatment.

General Statement

The American Board of Periodontology was organized by the American Academy of Periodontology for the following purposes:

1. to elevate the standards and advance the science and art of periodontology by encouraging its study and improving its practice.
2. to determine the competence of those desiring to practice as periodontists and to arrange, control and conduct investigations and examinations to determine the qualifications of such individuals who voluntarily apply for the certification issued by the corporation.
3. to grant and issue certificates in the field of periodontology to voluntary applicants therefor and to maintain a registry of holders of such certificates.
4. to serve the public, the dental and medical professions, hospitals and dental schools by preparing and furnishing lists of periodontists certified by the corporation.

*Reprinted from booklet issued by The American Board of Periodontology.

It is the purpose of the Board to encourage the teaching of periodontology in the dental schools and to encourage its practice by all dentists. Periodontology is too intimately related to all dental procedures to be relegated to specialists only. But even were the subject to be well taught in all dental schools and to be practiced generally by all dentists, there are many cases that demand knowledge and skill beyond that of the general practitioner. There is a need for a body of experts who, by study and practice have the knowledge and skill to serve the profession and public in a superior manner in these cases.

The professions and the public must have means of recognizing qualified experts and of distinguishing between them and persons who seek the financial and social advantages of expert status without being qualified in knowledge, experience or skill for its responsibilities. Specialization is a natural outgrowth of the multiplication of skills demanded in the practice of dentistry. It is impossible for a dentist to be highly expert in all branches of dentistry at the same time. Ambition for high attainment, financial advantage and physical limitations combine to encourage dentists to eliminate from their practice those phases in which they are least interested, and concentrate on those in which they are most competent. Thus a considerable degree of specialization has grown up in dentistry as in medicine with no professional or legal regulation. There have been no standards of proficiency in the education or qualification of specialists in dentistry and it has been impossible for the profession, to say nothing of the public, to know whether a so called specialist is really highly qualified or not until he has proven incompetence by injury to his patients.

In order to remedy this situation in the medical field, the medical specialty groups have set up certifying boards for thirteen branches. These boards have established standards of education and attainment, examined and certified qualified candidates and published rosters of certified experts. The boards have more or less completely regulated the chaotic specialty situation in medicine without need of state legislation. The American Board of Orthodontics was created by the American Society of Orthodontists in 1929. It has gone far in establishing high standards for the preparation of orthodontists, and making it possible for profession and public to discover who the qualified orthodontists actually are.

The status of periodontology as a specialty is more complex than that of orthodontics and most specialties in medicine, owing to the fact that a practice limited exclusively to the surgical and prophylactic treatment of the periodontal tissues is inadequate without treatment devoted to restoration of occlusion, support and functional anatomy of the teeth. There are few periodontists who find it possible to depend entirely on dentists, who refer patients for surgical and prophylactic treatment, to follow out the supplementary operative, crown and bridge and prosthetic procedures in a manner best calculated to support the services performed by the periodontist. The periodontist, therefore, must either perform these operations himself for patients who wish him to superintend their treatment, or surround himself with associates who can and will fully support his efforts. For this reason it has seemed inadvisable to the Board of Periodontology to require complete limitation of practice to surgical and prophylactic procedures as a prerequisite for certification of proficiency in periodontology. It is also the reason why the Board insists on a high degree of knowledge and proficiency in general clinical dentistry as a part of the qualification for certification.

By setting up educational qualifications, it is expected that there will be an increase in post graduate education in periodontology, which is greatly to be desired. The specific examination subjects make it possible for the dental schools to prepare post graduate courses toward a definite goal. The standards set up for qualification make it necessary for those desiring certification in the future to take such courses.

There is not quite the same compulsion for the expert in dentistry to be certified, as there is in medicine. In the medical specialties, a necessity for hospital affiliation exists that can be satisfied only by certification. However, the growth of generally used lists of dental experts certified by competent bodies in the profession, will in time make it highly desirable for qualified individuals to have their names included. As the professions grow accustomed to dependency on the rosters of certified experts for the selection of consultants, it is hoped that the

present difficulties experienced within the profession from self appointed unqualified specialists will disappear without need for state legislation.

Rules of Procedure in the Certification of Candidates

(Articles from By-Laws of the Board)

SECTION I

Application for the Certificate

A. Every candidate shall file with the Secretary a formal application, in duplicate, on forms prepared for the purpose, stating educational qualifications, professional experience and clinical appointments. This shall be accompanied by an unmounted recent photograph of the applicant, together with the names of two periodontists acceptable to the Board who may be referred to for information regarding the candidate.

B. The application must be filed with the Secretary at least sixty days before the candidate expects to appear for examination.

C. The application shall be accompanied with the application fee of $25.00. If the candidate does not take the examination within three years from the date of application, this fee shall be forfeited.

D. The fee for certification is $50.00 which includes the application fee. This is to be paid in full prior to the examination. This fee will be returned only in the cases of candidates found unacceptable for the examination.

SECTION II

General Requirements for the Candidates

A. Membership in the American Dental Association, or by courtesy, the Canadian Dental Association or other foreign national dental organizations recognized by the Council on Dental Education as maintaining equal standards for membership.

B. Graduation from an acceptable dental school of the United States or Canada.

C. High ethical and professional standing in his community.

D. Five or more years of practice of dentistry, largely devoted to periodontology.

E. Proof of post graduate work in dentistry equivalent to eleven months of full time study.

F. A list of papers and books published by the candidate.

G. Report of three cases of varied character which have been observed and treated by the applicant.

H. A passing grade in the written and clinical examinations.

SECTION III

Requirements for Experienced Periodontists

Prior to 1944, practitioners who for ten or more years have been recognized sufficiently by their confreres as highly proficient in periodontology so as to have patients generally referred to them for periodontal treatment, or who have for this length of time been teaching periodontology in dental colleges, and who have made well recognized literary and scientific contributions in the field of periodontology, may be considered by the Board to have satisfied the education requirement. The Board may use its discretion as to requirement for case reports and examination in these cases.

SECTION IV

Case Reports

A. Detailed instructions about case reports may be obtained from the Secretary. These reports should be of cases of periodontal disease of varied character and sufficient severity to tax the diagnostic and operative skill of the applicant.

B. Case reports must be sent to the Secretary at least sixty days before the date of the examination. They will become the property of the Board, but on request, the Board may give permission to use them for other purposes.

C. Upon receipt by the Secretary of case reports, the original copy will be sent to members of the Committee on Examinations in such order that the Chairman will receive them last. The members of this committee will be notified that such reports are being circulated among the members of the committee.

D. The average of the grades given to each set of case reports by the Committee on Examinations will be reported immediately to the Secretary of the Board. Upon recommendation of the Committee on Examinations, the Secretary shall

notify a candidate that he will not be permitted to take the examination until he has submitted a satisfactory further set of case reports.

SECTION V

Examinations

A. Purpose

The purpose of the examination is to determine the qualification of the candidate to practice periodontology.

B. Content of Examination

1. A practical clinical examination
2. A written examination in science and theory.

C. Time and place

1. Examinations shall be held annually, at or near the time and place of the meeting of the American Dental Association. Additional special examinations may be held at suitable times and places, but no special examination may be held at which less than three members of the Board are present to take charge of the several subjects.
2. No special examination shall be held unless at least five candidates announce their intention to be present and pay their application fees in advance.
3. The Board will endeavor to hold an examination in the Rocky Mountains or Pacific Coast region at least once every three years.
4. Notices of examination shall be published in the district and state dental journals and in the Journal of the American Dental Association.

D. Subjects of Examination

Case reports
Histology and Pathology of the field
Oral diagnosis and treatment planning
Oral micro-biology
Oral anatomy
Periodontia practice—conservative and surgical
Oral hygiene including applied nutrition, bio-chemistry and endocrinology
Mouth rehabilitation
Periodontology theory

E. Passing grade

The passing grade in any subject is to be 65%. If below 65% in any subject, the candidate will be conditioned in that subject.

F. Failures at examination

If a candidate fails in an examination he may at any time within three years be admitted to re-examination without additional fee.

The Secretary shall notify each candidate of the result of his examination, or of irregularities or defects on account of which the certificate has been deferred or refused.

G. Consideration of candidates

As to each application, after adequate discussion and conference upon the findings of the examiners, together with the report on case reports by the Committee on Examinations, a vote shall be taken to decide whether the candidate shall be passed or conditioned, or the application deferred or rejected.

H. Appeal

There shall be no appeal from the action or decision of the American Board of Periodontology in regard to any candidate for its certificate; the decision of the Board shall be final.

SECTION VI

Form of Certificate

The certificate shall read as follows:

The American Board of Periodontology
hereby certifies that
Dr. John Blank
has pursued an accepted course of post graduate study and clinical work, and has successfully passed the examination in periodontology conducted under the authority of this Board.

(Date. Signatures of members of the Board)

SECTION VII

Revocation of Certificate

The American Board of Periodontology shall have the sole power, jurisdiction and right to determine and decide whether the evidence or information placed before it is sufficient to constitute grounds for revocation of any certificate issued by this Board, and the decision of the Board in the premises shall be final.

SECTION VIII

Preparatory Group

Persons not yet eligible for the Board examinations for certification but expecting to qualify later, may, upon payment, of ten dollars become members of a Preparatory Group. It shall be the duty of a Committee on Preparatory Group of the Board to

assist such persons to prepare themselves adequately. The ten dollar fee will become part of the application fee, the balance of which must be paid at the time of formal application for examination for certification.

Official Correspondence

All official correspondence should be addressed to the Secretary-Treasurer, Harold J. Leonard, D. D. S., 630 West 168th Street, New York, N. Y.

Personnel of the Board

	Term Expires
Dickson G. Bell 450 Sutter St., San Francisco, Cal.	1941
M. Monte Bettman 528 Medical Arts Bldg., Portland, Ore.	1941
Austin F. James 1615 Marshall Field Annex, Chicago, Ill.	1942
Olin Kirkland, Vice Chairman 712 Shepard Bldg., Montgomery, Ala.	1942
Harold J. Leonard, Secretary-Treasurer 630 West 168th Street, New York, N. Y.	1943
Arthur H. Merritt, Chairman 580 Fifth Ave., New York, N. Y.	1943

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EIGHTH ANNUAL

POSTGRADUATE COURSE IN

PERIODONTIA

New York University College of Dentistry
New York, New York

New York University College of Dentistry will hold its eighth annual postgraduate course in Periodontia for twenty sessions, as follows: Schedule A—morning and afternoon sessions, June 16 to June 27, 1941. Schedule B—morning and afternoon sessions, June 16 to 18; mornings only, June 19 to July 9. All dates inclusive. The fee is $100. COURSE LIMITED TO FIFTEEN MEN. Preference given in order of receipt of application.

The course will include etiology, diagnosis, and treatment of periodontal disease; various techniques of pocket eradication, with conservative treatment stressed; Vincent's infection; diagnosis of types of bone resorption; mouth manifestations of systemic disease; periodontal foci of infection; toothbrushing; instrumentation; balancing of occlusion. Taught by lectures and clinical work, each student treating several cases.

Instruction by Drs. Samuel Charles Miller, Sidney Sorrin, J. Lewis Blass, and the entire Periodontia faculty.

For further information and application, address the Office of the Dean, New York University College of Dentistry, 209 East 23d Street, New York, New York.

Index of Abstracts

Bold face figures refer to abstracts, light face figures to pages.

Abscess, interradicular, (f)534-38
Abscess, pericoronal, (f)523-34
Allergy related to dental practice, (e)329-31
Alveolar bone resorption, determination of, (e)331-32
Alveolar pyorrhea, (f)583-51
Argolaval in dentistry, (f)550-42
Ascorbic acid analysis of blood serum, (e)322-29
Bacteremia and oral sepsis, (e)326-30
Bite displacement and relief treatment in paradentosis, (f)580-51
Boric acid and iodine, misuse of, (i)212-55
Bucco-dental diseases, treatment of, (f)561-45
Can diseases of the teeth be treated with vitamin preparations? (f)525-35
Clinic of paradental diseases, (e)324-29
Coffee-charcoal treatment in angina, (f)560-45
Diet, predisposing factor in Vincent's infection and periodontitis, (h)230-53
Electrosurgery in the treatment of periodontoclasia, (f)577-50
Epilepsy, treatment of, (e)332-32
Fads in periodontal treatment, (f)578-50
Gangrenous stomatitis, (e)317-28
Gingivectomy, (f)569-47
Gingivitis, its treatment with Targesin, (f)575-49
Gingivitis, chronic hypertrophic, (f)571-48
Gingivitis gravidarum, treatment of, (f)566-46
Gingivitis, hypertrophic, (e)339-34
Hormonal therapy for gingival conditions, (f)589-53
Hormones and vitamins for stomatology, (f)527-36
Hypovitaminotic conditions of tongue and oral mucosa, (f)544-40
Inflammatory conditions of oral mucosa during orthodontic treatment, (f)562-45
Impacted cuspid, traumatic changes around, (i)214-55
Importance of the loss of teeth, (f)552-43
Indophenol used to test vitamin C metabolism, (e)318-28
Leukemia, acute myologenous, manifestations in mouth, (e)333-32
Moeller-Barlow's disease, symptomatology and etiology, (e)319-28
Mouth and tooth diseases, treatment with ozone, (f)585-52
Neoarsphenamine and sulpharsphenamine, effects of, (h)232-54
Novamide 109 M in stomatology, (f)555-43
Observation on the contagiousness of fuso-spirillar symbiosis, (e)334-32
Observations on vitamin C requirement, (f)568-47
Oral pathology, relation to clinical dentistry, (e)323-29
Occlusion, periodontal view of, (f)586-52
Orthodontia and paradentosis, (f)563-46
Ozone therapy, (f)557-44
Orthopedic paradentosis therapy, (f)581-51
Paradental pathologies in school of recruits, (f)565-46
Paradentosis, cure of, (f)542-40
Paradentosis, etiology, therapy and prevention, (f)530-37
Paradentosis, parodontitis, and gingivitis, (e)327-30
Paradentosis therapy in young patient, (f)537-39
Paradentosis therapy, (f)549-42
Paradentosis, treatment and prevention of, (f)584-52
Paradentosis with tooth migration in tumor of hypophysis, (e)338-33
Periadenitis mucosa necrotica recurrens, (e)328-31
Pericoronal infection, (f)576-49
Periodontal disease and electro-coagulation, (f)588-53
Periodontia, past and future, (i)220-57
Periodontia, past and present, (e)320-28
Periodontoclasia, conservative treatment of, (f)558-44
Periodontology, historical background of, (i)218-56
Periodontal practice, economic value of, (i)216-56
Photography tells story, (f)536-38
Prevention of caries in pregnancy and nursing period, (f)533-38
Pyorrhea alveolaris and focal infection, (f)522-34
Pyorrhea and its treatment, (f)567-47
Pyorrhea cures, (f)531-37
Radium poisoning from watch dial painting, (i)219-56
Reattachment following periodontoclasia, (f)540-39
Riboflavin deficiency, (f)579-50
Roentgenographic diagnosis in paradentosis, (e)337-33
Sodium sulphide in treatment of periodontal pockets, (f)528-36
Splint, fixed, in paradentosis, (f)548-42
Sterilization of instruments, (i)211-55
Stomatitis due to gold, (f)541-40
Stomatitis, gingivitis, treatment of, (f)556-44
Submaxillary calculus, (i)213-55
Surgical methods of treating pyorrhea, review of, (f)564-46
Surgical technic, conservative, for eradication of pyorrhea pockets, (f)526-35
Systemic conditions of paradentosis patients, (e)335-33
Teaching of periodontia, (i)217-56
Therapy, internal, in diseases of the periodontium, (f)524-35
Therapy of periodontoclasia, (f)570-47
Tooth anatomy, correction of abnormal, (f)572-48
Toothbrush, study of, (i)215-56
Treatment, medico-surgical, of paradentosis, (f)547-41
Treatment of paradentosis, functional, (f)529-36
Treatment of pneumococcic angina and stomatitis by applications of beef bile, (f)535-38
Treatment, surgical, of paradentosis, (f)546-41
Treatment of pyorrhea, frauds and fads in, (f)532-37
Trench mouth, (f)539-39
Tubercular osteomyelites, (e)316-28
Ulcero-membranous gingivitis, (e)325-30
Ulcero-membranous stomatitis, (h)233-54
Ulcerous stomatitis, treatment of, (f)553-43
Vincent's infection and erythema multiforme, differential diagnosis, (e)330-31
Vincent's infection, experimental, (h)231-53
Vitamin A and B deficiency—an etiologic factor in Vincent's infection, etc., (h)234-54
Vitamins and periodontoclasia, (f)573-48
Vitamin B_2 therapy, (f)574-49
Vitamin C, administration of, (f)559-45
Vitamin C and coffee charcoal, new method treating pulpless teeth, (f)551-42
Vitamins as curative agents, (f)554-43
Vitamins as curative agents, (f)554-43
Vitamin C considerations, (f)587-52
Vitamin C influence on blood coagulation, (f)543-40
Vitamin C requirement of the child, (f)582-51
Vitamin C standard in children, (f)545-41
Vitamin C, use of, in paradental disease, (e)321-29
Vitamins in prevention of pellagra, (f)538-39
Xerostemia, (e)336-33

Index of Authors

Albanese, P. ---- 34
Allen, W. G. ---- 34
Althoff, W. ---- 35
Asbell, Milton B. ---- 28
Baer, M. ---- 35
Barkann, L. ---- 35
Beck and Krieger ---- 28
Bennholdt-Thomsen, C. ---- 28
Berblinger, W. ---- 36
Beube, Frank E. ---- 36
Beyerler, K. ---- 36
Biaggi, D. ---- 37
Blanquie, Raoul H. ---- 28
Blass, J. L. ---- 37
Bremner, M. D. K. ---- 37
Breuer, K. ---- 29
Brewer, John H. ---- 55
Bucher, A. ---- 38
Cahn, L. R. ---- 29
Cashman, Montague A. ---- 38
Chalier, J. ---- 38
Chapman, E. ---- 38
Classen, H. ---- 39
Davidoff, S. M. ---- 29
Davis, W. Clyde ---- 39
Deleau, R. L. ---- 30
De Queiroz, D. P. ---- 40
Dinslage ---- 40
Eldridge, Zachary ---- 55
Elliott, S. D. ---- 30
Euler, H. ---- 30
Fasoli, G. ---- 40
Fergusson, A. ---- 31
Figg, W. A. ---- 55
Fuchs, Abner ---- 31
Goldstein, Harold ---- 31
Griebel, C. R. ---- 40
Grosby, Jerome S. ---- 32
Herlitz, C. H. ---- 41
Hoever, R. ---- 41
Hulin, M. ---- 41
Jeanneret, M. ---- 42
Jonas ---- 42
Jugel, H. ---- 42
Jung, O. ---- 42
Kammerer, J. ---- 43
Kauffmann, Joseph H. ---- 56
Kimball, O. P. ---- 32
Kirkland, Olin ---- 56
Kirkpatrick, R. M. ---- 53
Kleiser, O. ---- 32
Köhler, H. J. ---- 43
Kula ---- 32
Kuthan ---- 43
Lebourg ---- 43
Lehmann, K. ---- 44
Lehne, R. ---- 44
Leonard, Harold J. ---- 44
Leopold, E. ---- 45
Link, G. ---- 45
Longnon ---- 45
Lufkin, Arthur W. ---- 45
Madarasz, E. von ---- 46
Madison, W. J. ---- 46-56
Magnin, G. ---- 46
Merritt, Arthur H. ---- 56
Molnar, Laszlo ---- 46
Morrison, W. A. ---- 47
Neuwiler ---- 47
Orban, Balint ---- 47
Ossenberg, C. ---- 47
Palazzi, Prof. S. ---- 33
Pecorone ---- 48
Potter, William E. ---- 48
Rhoads, C. P. ---- 49
Ritzert, A. ---- 49
Rosebury, Theodor ---- 53-54
Ruppe ---- 54
Salman, Irving ---- 49
Scherer, W. H. ---- 50
Sinclair, J. A. ---- 54
Smith, Rowe ---- 50
Stillman, Paul R. ---- 47
Sydenstricker, V. P. ---- 50
Thiel, H. van ---- 51
Thielmann, K. ---- 51
Tobler, W. ---- 51
Todokinof, Prof. ---- 51
Türk, M. ---- 52
Vandrepote ---- 52
Walsh, Joseph R. ---- 52
Weski, O. ---- 33
Wolfsohn, M. D. ---- 53
Wullenweber, G. ---- 33
Ziskin, Daniel E. ---- 34-53